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ABSTRACT

This report is a compilation of data obtained from the California Conservation and Environmental Education Survey. The purpose of the survey was (1) to find out whether the legislative mandate, calling for instruction in the protection and conservation of resources and including the necessity for the protection and environment, is being carried out and (2) to find out what services are needed in order to aid the schools in carrying out more thoroughly this mandate and in improving their environmental education programs. To obtain information a questionnaire was sent to all school districts and county offices of education in California. The environmental education program of each county is summarized, through the following topics: reply rate, publications, teacher training, on-site environmental study areas, resident outdoor education school programs, special funds or grants, and evaluations. Additional reports include those from community organizations (Sierra Club and National Audubon Society) and specific agencies (U.S. Office of Education, State Department of Education, County Offices of Education, and U.S. and State Departments of Forestry, Agriculture, Parks and Recreation, Water Resources, Fisheries and Wildlife, Soil Conservation, and the Environmental Protection Agency). Comments on proposed legislation and suggested areas for program improvement conclude the report. (BL)

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ED 079104

CALIFORNIA CONSERVATION AND ENVIRONMENTAL EDUCATION SURVEY

by
Melanie Blade

Resources Development Internship Program
Western Interstate Commission for Higher Education

SE 016 431

California Conservation

and

Environmental Education Survey

Submitted by
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Environmental Education
California Department of Education
Under Rudolph J. B. Schafer

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INTRODUCTION

OBJECTIVES

This report is a compilation of the California Conservation and Environmental Education Survey. In general terms, the purpose of the survey is 1) to find out whether the legislative mandate, calling for instruction in the protection and conservation of resources, including the necessity for the protection of our environment, is being carried out and 2) to find out what services are needed in order to aid the schools in carrying out more thoroughly this mandate and in improving their environmental education programs.

More specifically, the survey is an attempt to serve 5 informational functions. 1) The survey is to provide California educators with an overall conservation-environmental education report. 2) Information which should be of use to specific agencies in evaluating their environmental education programs, is provided. This information is provided for the State Department of Education, County Offices of Education, U.S. Office of Education and other state and federal agencies that are mentioned more than 10 times by those responding to the survey. 3) The report provides information about the effectiveness of community organizations working with schools in environmental education. 4) The legislative needs expressed by the school districts and county offices of education are provided. 5) The report includes suggested areas for improvement, based upon the survey data.

PROCEDURE

In order to carry out the survey, a questionnaire was sent to all the school districts and county offices of education in California. A total of 1,125 questionnaires, to the 1,067 school districts and 58 county offices, were sent out. We received 428 completed questionnaires, constituting a 38% reply rate. Following is a copy of the questionnaire.

(PLEASE CHECK)

RETURN TO: Rudolph J. H. Schafer
Consultant in Conservation Education
Health and Safety Unit, Room 458
California State Department of Education
721 Capitol Mall
Sacramento, California 95814

County Office _____

District Office _____

CALIFORNIA CONSERVATION AND ENVIRONMENTAL EDUCATION SURVEY - 1971

This questionnaire has been sent to all county and school district offices in California. The information obtained will be used to:

- identify funding needs and priorities.
- improve the services offered by educational, governmental, and private agencies.
- provide California educators with a much needed conservation-environmental education status report.

Since you stand to benefit directly from the results of this project, we urge your full cooperation in completing and returning the questionnaire no later than November 20, 1971.

1. Name of office or agency: _____

   County: _____

2. Do you have a staff member who has full _____ or part-time _____ responsibilities in the field of conservation or environmental education?

   Name: _____ Address: _____

   _____ Telephone: _____

3. Does your district and/or county have an official policy or subject requirement in addition to the requirements of the State Education Code relating to conservation and environmental education? (Please give details) _____

   _____

   _____

4. Have you prepared _____ or are you preparing _____ any publications on conservation and environmental education? Comments: _____

   _____

   _____

   _____

5. Do you conduct _____ or participate in _____ conservation and environmental education teacher training activities? _____. Comments:_____

_____

_____

6. Approximate number of schools in your district/county which have developed on-site environmental study areas: _____. Comments:_____

_____

_____

7. Do you operate or participate in a resident outdoor education school program? _____. Length of program (overnight, week, etc.)_____

Grade level:_____. Number of students participating per year: _____

Operated by:_____

8. Can you accommodate professional-level visitors to observe or discuss your conservation and environmental education activities? _____. Will you supply copies of your materials to other educational agencies?_____. Comments:_____

_____

_____

9. Are any special funds or grants used by your agency for projects and activities in conservation and environmental education?_____. Comments:_____

_____

_____

10. For the past ten years, the State Department of Education has mailed a packet of conservation materials to schools throughout the state for use during Conservation Week, March 7-14. In your opinion, how useful are the packets?

Little Value:_____ Some Value:_____ Great Value: _____

Comments:_____

_____

11. Approximate number of schools in your district/county which conduct conservation or environmentally oriented co-curricular activities: Elementary _____

Secondary _____. Comments:_____

_____

_____

12. What specific environmental education services, programs, and/or materials not currently available would you like to see provided by educational agencies, private industry, citizen conservation groups, or governmental agencies?

13. Have you done anything in the evaluation of conservation and environmental education programs? _____. Comments _____

14. Do you have any ideas or suggestions for federal, state, or local legislation relating to conservation or environmental education?_____

5. Community Assistance. Please check the appropriate boxes indicating the source and type of program services obtained from agencies outside of your district/county. Your comments as to the value of these services would be appreciated.

	Materials, Publications, Information	Speakers Consultants,	Facilities (Parks, tours)	Teacher Training	Comments
U.S. Office of Education					
State Department of Education					
County Office of Education					
Federal Agencies (Please List)					
State Agencies (Please List)					
Community Organizations (Please List)					

Continued

	Materials, Publications Information	Speakers, Consultants	Facilities (Parks, tours)	Teacher Training	Comments
ivate Industry (Please List)					
ther (Please List)					

l mb

Each questionnaire was read and the data put into the 5 informational categories.

Most of the effort and time was spent in compiling the county-by-county status report. It was necessary to summarize each county with a common denominator, therefore, for each county, 7 elements were elaborated upon. The category titles, all relating to environmental education, are Reply Rate, Publications, Teacher Training, On-Site Environmental Study Areas, Resident Outdoor Education School Programs, Special Funds or Grants, and Evaluations. Each category is based on one of the survey questions. Numbers of school districts, within each county, participating in each program, are given. Some descriptions and explanations are also given of the programs, if they are particularly thorough or unique.

The statewide data summary is basically a headcount, for the entire state, of the environmental education factors asked on the questionnaire.

The specific agency reports are taken from the last 2 pages of the questionnaire which ask the respondents to comment on their experience with state and federal agencies with regard to environmental education, and whether they have received materials, consultants, facilities, or teacher training from them.

For the community organizations, the information is also taken from the last two pages of the questionnaire.

Ideas for proposed legislation are taken both from the suggestions given by the respondents in answering question fourteen and from studying all the questionnaires.

The suggested areas for improvement are from questions 12 and 14 and from conclusions based on the entire survey.

ANALYSIS OF THE QUESTIONNAIRE

Question 1, which asks the names of the responding agency, is, of course, straightforward.

Question 2, which asks for the name and address of the staff member, if there is one, with full or part-time responsibilities, in the field of environmental education, is also straightforward. This information is not included in the report, because it changes so rapidly. Instead, a separate list of county and district school personnel with environmental education responsibilities was printed and made available in the State Environmental Education Office.

Question 3, which asks if the district or county has an official policy or subject requirement, in addition to the

requirements of the State Education Code relating to environmental education, also was left out of the report. It was left out because only an insignificant number replied affirmatively to this question. Many others had developed environmental education programs and classes but did not want to label them as official policy or requirements.

There were few misunderstandings over question 4, which asks if they have prepared or are preparing any environmental education publications. The range of publications, though, was certainly great. It included one page pamphlets for district use only, to project proposals for grants, to large environmental education booklets to be made available on a much wider basis, to general publications with only a very small portion dedicated to environmental education.

There were some problems over question 5, which asks if the districts or counties, conduct or participate in environmental education teacher training activities. Some school districts replied affirmatively if even one teacher took one class, on a voluntary basis, from another institution, whereas others replied affirmatively only if the teacher training was initiated or required by the district. Another confusion occurred over the definition of environmental education teacher training; whether it has to be a course specifically labeled environmental or conservation studies or whether a general teacher training session, containing a science unit which may have some environmental orientation, can be considered in this category. Still, the data from this question is valid in giving a general idea of the extent of environmental education teacher training in California.

Question 6, which asks the approximate number of schools in the district/county having developed on-site environmental study areas, is somewhat ambiguous. Many school districts interpreted this to mean anything from the playground to state or national parks. Most of the interpretations of on-site environmental study areas, though, are reasonable; district-owned property used for educational study of the environment.

Question 7 elicits a more well-defined response. It asks if the district or county operates or participates in a resident outdoor education school program, the length of the program, grade level, number of students participating and who it is operated by. We received specific responses to these questions, but little description of the programs.

Question 8 asks if the county or district could accommodate professional-level visitors to observe or discuss environmental education activities. This question was not used in the report because only a very few have facilities well-developed enough to interest visitors. A separate list may be published, listing

well-developed environmental education programs and facilities, which school personnel can visit for ideas.

Question 9 asks if any special funds or grants have been received. There was little confusion over this question.

Question 10 is for use only by the Environmental Education Office.

Question 11, which asks the approximate number of schools in the district/county conducting environmentally oriented co-curricular activities, was very bad and had to be thrown out. Co-curricular activities is the new term used to mean extra-curricular activities, but few of the respondents knew the meaning of the word. Many took it to mean classroom activities, and many replied that they didn't understand the question.

Question 12, 13, and 14 were straightforward and there was little confusion over them. All 3 of these questions were used in the report.

STATUS REPORT

COUNTY BY COUNTY DATA

The environmental education program of each county in California is summarized in the following pages.

Alameda County

Reply Rate

The County Office of Education replied to the questionnaire along with 9 school districts out of 19. Rather than replying itself, Livermore Valley Joint Unified School District asked individual schools to reply. We received replied from 5 schools in this district.

Publications

The Alameda County Office of Education has published a very thorough 96 page resource guide, Environment - A Way of Teaching. The Alameda County School Department prepared the guide with the assistance of Dr. Esther Railton, Associate Professor of Education, California State College, Hayward, Miss Mary Jefferds, Director, Bay Area Educational Services, National Audubon Society, and many others. The guide contains the Introduction, State Conservation Report, and sections on Ways of Teaching, Action Programs, Activities in the Outdoors, Resources, Agencies, Organizations and Programs, Library Materials, the State Education Code and Federal and State Laws and Regulations.

Alameda City Unified School District is preparing a publication on urban studies on the basis of 12 classes, grades 5 and 6, participating in a 1971-72 project.

Washington School, in Berkeley Unified School District, is developing and field testing environmental education materials.

Fremont Unified School District is now trying to plan a K-12 program of environmental education.

Hayward Unified School District organized and distributed a special conservation education bulletin for Conservation Education Week.

Murray Elementary School District has published an Outdoor Education Handbook for 6th graders and their parents, giving a description of camp activities and listing their goals.

Oakland Unified School District has developed 2 guides on Ecology.

Teacher Training

The County has cooperative teacher training arrangements; East Bay Water Pilot/Nature Areas (Alameda and Contra Costa Counties) and Marine Ecology Research (MEP) (Alameda and Contra Costa Counties). Of the replying school districts, 2 have no environmental education

teacher training, but the rest do participate in teacher training programs such as workshops sponsored by Alameda and Contra Costa Counties, California State College at Hayward, and East Bay Regional Parks, and classes conducted by Dr. Esther Railton of California State College at Hayward. Alameda City Unified School District teachers are given orientation training to acquaint themselves and their students with the objectives of their Urban Studies Project. Berkeley Unified School District participates in several teacher training programs. Teachers from Berkeley Unified attend the Alameda/Contra Costa teacher training. Also, Washington School is developing a pre- and inservice environmental education program. Dr. Herb Wong, principal, Washington School, is conducting a University of California extension course in environmental education curriculum development for teachers and student teachers. Many Berkeley Unified School District teachers have Audubon urban ecology training.

On-Site Environmental Study Areas

The County Office assessed the number of areas at 10-15 in the County. Among the replying school districts, there are 18 study areas. Of special interest is Washington Environmental Yard, at Washington School in Berkeley Unified School District, a concept and process devoted to the total development of a prototype urban primary school - community outdoor man-made/natural environment. It includes the study, planning and extensive redevelopment of the entire existing school playground space, the school's open roof area and a segment of the adjoining street.

Resident Outdoor Education School Programs

Only 4 of the replying districts in Alameda County, participate in resident outdoor education school programs. Fremont Unified School District has a one-week program operated by 4 elementary schools. This program is for grade 6 and 250-300 students take part. Newark Unified School District participates in MER (Marine Ecology Research) Program. In Berkeley Unified, individual schools cooperate with East Bay Regional Parks. The program is for grades K-6 and more than 1500 students participate. In Murray Elementary School District, 5th graders spend one day at Sunol Park and about 600 6th graders spend one week at Alliance Redwood Camp.

Special Funds or Grants

The County and two of the replying districts have special funds or grants. Contra Costa and Alameda Counties have a National Science Foundation grant for Marine Ecology Research. Alameda City Unified has a Rotary Club grant for their Urban Studies Project. In Berkeley Unified School District, Washington School has a planning grant from Education Facilities Laboratories for its

Environmental Yard and Berkeley High's East Campus has, though the Experimental School Program, financial support for organic gardening.

Evaluations

The County Office and 2 of the replying school districts have not conducted any evaluations. The rest evaluated their programs through committees, teachers, parents and students; some informally and others using more formal processes.

Alpine County

Reply Rate

The Alpine County Office of Education replied to the questionnaire, but the one school district in the County did not reply.

Publications

Alpine County has no conservation education publications.

Teacher Training

There is no participation in environmental teacher training activities in Alpine County.

On-Site Environmental Study Areas

There are no on-site environmental study areas in this county.

Resident Outdoor Education School Programs

Alpine County does not participate in any resident outdoor education school programs.

Special Funds or Grants

There are no special funds or grants for environmental education.

Evaluations

Alpine County has not evaluated conservation and environmental education programs.

Amador County

Reply Rate

The County Office did not reply to the questionnaire and only one out of 3 districts in the county replied.

Publications

Jackson Unified School District has no environmental education publications.

Teacher Training

One of the teachers in the district attends classes and workshops dealing with environmental education.

On-Site Environmental Study Areas

A 2 1/2 acre site for environmental study is under development now, they are attempting to finance this entire development with funds derived from recycling activities.

Resident Outdoor Education School Programs

There is no participation in a resident outdoor education school program.

Special Funds or Grants

This district receives no special funds or grants.

Evaluations

No evaluation of environmental education programs has been carried out.

Butte County

Reply Rate

The County Office replied to the questionnaire but only 4 out of 16 school districts in the County replied.

Publications

There are no environmental education publications in Butte County, but Chico Unified District is planning to produce one very soon dealing with elementary education.

Teacher Training

Most districts encourage teachers to participate in conservation workshops. Primary level teachers in Gridley Union Elementary School District receive environmental education training from the U.S. Forest Service. In Manzanita Elementary School District, conservation education materials and information are distributed to teachers.

On-Site Environmental Study Areas

The County Office replied that there is one on-site environmental study area in the county. Chico Unified School District reports that one study area was developed but has been destroyed by vandalism and has not been rebuilt. Thermalito Union Elementary School District replied that it has 3 environmental study areas.

Resident Outdoor Education School Programs

The County Office replied that they take part in a program operated by Shasta County with about 160 students participating. Chico Unified School District has a 2 1/2 day program for grades 4-6 operated by the Summer School Program.

Special Funds or Grants

None of the replying districts in Butte County nor the County Office receive any special funds or grants for environmental education.

Evaluations

Only Thermalito Union Elementary School District replied that it conducts evaluation of conservation and environmental education programs, and mentioned that it is not a highly structured evaluation.

Calaveras County

Reply Rate

The County Office did not reply and only one district out of 4 replied, Calaveras Unified School District.

Publications

There are no publications in environmental education from this district.

Teacher Training

Calaveras Unified School District does participate in conservation education teacher training training activities.

On-Site Environmental Study Areas

All the schools use their grounds for some environmental science.

Resident Outdoor Education School Programs

Calaveras Unified Participates in a one week program for grade 6. About 60 students take part. This program is operated by Stanislaus County Schools.

Special Funds or Grants

They receive funds through participation in an Area II Science project.

Evaluations

This school district does evaluate conservation and environmental education programs.

Colusa County

Reply Rate

The County Office and one school district, Maxwell Unified, out of 4, replied to the questionnaire.

Publications

There are no publications for environmental education in Colusa County.

Teacher Training

There were 2 successful teacher inservice programs in the 1970-71 school year. Currently, some teacher training activities are being conducted in cooperation with Sutter County.

On-Site Environmental Study Areas

One site is being developed on the Colusa Elementary School grounds.

Resident Outdoor Education School Programs

About 30 6th graders participate in the Woodleaf Outdoor Education Program for one week, which is operated by Sutter County Schools.

Special Funds or Grants

There are no special funds or grants being received by Colusa County.

Evaluations

There is no evaluation of environmental education programs conducted in Colusa County.

Contra Costa County

Reply Rate

Out of 16 school districts, 5 replied to the questionnaire; no reply was received from the County Office.

Publications

Mt. Diablo Unified School District has published an outdoor education guide as well as a set of cards for outdoor education activity. Mt. Diablo also has published a short paper on "How to Develop an On-Site Educational Area".

Richmond Unified School District hopes to publish some environmental material soon.

Teacher Training

All the replying school districts participate in some type of teacher training activities. Byron Union Elementary personnel participate on a voluntary basis through University Extension courses. The teachers in Orinda Union Elementary School District receive environmental teacher training through St. Mary's College. In Richmond Unified School District, 3 qualified teachers conduct an inservice education course on environmental education for which 2 units of salary credit are granted.

On-Site Environmental Study Areas

Mt. Diablo Unified School District has 4 on-site environmental study sites; 2 of them are particularly well developed and one has a written curriculum for its use. Orinda Union Elementary School District has 2 study areas. One is a 30 acre site and a great deal of follow-up and evaluation of its effectiveness has been conducted. In Richmond Unified School District, 7 of the 48 elementary schools are in some stage of weeking to develop on-site nature study areas; there are nature trails, rustic areas, natural study areas and other types of facilities.

Outdoor Education School Programs

Orinda Elementary School District operates an outdoor education school program for grades 5 and 6. About 700 students participate in this program. In Richmond Unified, elementary school students take nature study trips. On the secondary level, 180 students from grades 11 and 12 are enrolled in the day program in the Project in Marine Biology, Marine Ecology Research. Mt. Diablo Unified School District conducts a resident outdoor education program for 5th and 6th grades which lasts for 3 days and involves

about 5,000 students. In Byron Union Elementary School District, 30-35 students in grade 6 take a trip to Yosemite Park. This program is operated by the district superintendent and students sell candy to help defray expenses.

Evaluations

Byron Union conducts teacher and teacher-student evaluations of student council sponsored recycling and tree planting projects. In Orinda Union, they have observed the numbers of return trips by children and by parents bringing their children back to the environmental study site used. They have also observed the actions toward the environment of the children after completing the various programs. Mt. Diablo Unified School District conducts student, teacher and parent evaluations.

Del Norte County

Reply Rate

The County Office replied to the questionnaire but the one school district in the county did not.

Publications

In collaboration with the National Education Association, Del Norte County is assisting in the development of materials for a model environmental workshop. Borchures are to be made available to various school districts throughout the nation.

Teacher Training

Del Norte County does participate in environmental education teacher training activities.

On-Site Environmental Study Areas

A site has recently been approved by the Board of Education to be located at the Pine Grove School.

Resident Outdoor Education School Programs

About 30 students from grade 5 take an overnight trip.

Special Funds or Grants

Del Norte County does not receive any special funds or grants.

Evaluations

Evaluations of environmental education programs are presented to the Board of Education as an informational item.

El Dorado County

Reply Rate

The County Office and 6 out of 16 school districts replied to the questionnaire.

Publications

El Dorado County has published, with the help of the districts, Let Nature Speak, a summary of teaching ideas in 5 physical areas of the County.

Georgetown Divide Union Elementary School District is developing an educational program for conservation and environmental study in grades K-8.

El Dorado Union High School District has published and distributed to all schools, for grades K-9, a County Guide for Conservation. The district is now preparing a Study Guide for Environmental Science for grades 11 and 12.

Teacher Training

Of the 6 replying districts, 4 either participate in or conduct environmental education teacher training activities. El Dorado High School conducts a teacher training program which has been shared with teachers at Amador High School. Georgetown Divide Union Elementary is training 8th grade pupils to act as student aides and help develop environmental units for grades K-3. Lake Tahoe Unified School District has engaged Dr. W. Hammerman of San Francisco State College to conduct a 30-hour in-service workshop.

On-Site Environmental Study Areas

The County Office stated that there are 5 on-site environmental study areas in El Dorado County. Among the replying school districts, there are 3 study areas. Georgetown Divide Union Elementary School District has a 35-acre site with trails and ponds in the transition life zone of the Sierra Foothills. Self-guided trails are now being developed at the site.

Resident Outdoor Education School Programs

El Dorado County replied that it has a one week program for grades 4-8 at Sly Park. About 300 students participate and it it operated by Buckeye School District and Mother Lode Union School District. About 15 Ponderosa High School students participate there as counselors and advisors. Georgetown Divide Union Elementary School District participates mainly in week-end activities for grade 5-8. The number of pupils participating varies. Silver Fork Elementary School District conducts a 3-day program for grades 1-8 with about 17-18 students participating.

Special Funds or Grants

Georgetown Divide Union Elementary School District has received some funds from local agencies. Silver Fork Elementary has also received some type of funding. The rest do not receive any special funds or grants, although Gold Trail Union Elementary District is developing a proposal in order to apply for funding.

Evaluations

Only 4 of the replying school districts have not evaluated environmental education programs. The County Office has done no evaluation but plans to do so soon. In Georgetown Divide, teachers have tested the students, students have evaluated the programs in oral and written form, and parent and community responses have been received. El Dorado Union High School District evaluates the environmental science classes. Also, constant evaluation is made of the use of the environmental study site at Ponderosa High School.

Fresno County

Reply Rate

The County Office and 20 out of the 52 school districts replied to the questionnaire.

Publications

The County Office has published a guide.

In Fresno City Unified School District, plans are being formulated for the development of specific teacher lessons that will be used in conjunction with a 10 acre site.

Houghton-Kearney Elementary School is developing a course of study containing their goals and objectives and environmental education will be included.

Parlier Unified School District plans to publish if their present outdoor facility plans can materialize.

Westside Elementary School District is completing a slide program with tape narration for a grant received in the 1970-71 school year.

Teacher Training

Of the 20 replying school district, 9 either conduct or participate in environmental education teacher training activities. The County Office conducts inservice training for teachers prior to the children's participation in the outdoor education program. Parlier Unified and Big Creek Elementary School District conduct inservice teacher training programs. Personnel from 4 of the school districts have attended workshops and classes at Fresno State College and Fresno City College.

On-Site Environmental Study Areas

The County Office replied that there are 4 nature study areas in Fresno County, but among the replying school districts there are 9 areas, at least in some stage of development. Sierra Elementary School District has a nature trail. Parlier Unified School District has just leased a 20 acre natural (pond-marsh-valley grassland) site for one year but additional funds are needed for site acquisition, development and personnel. Fresno City Unified has 3 on-site environmental study areas. One rather large project, is now in the developmental stage. The site was donated by the Metropolitan Flood Control District for use as an "environmental outdoor classroom" and development plans are being furnished by

the Forest Service. At Auberry Union Elementary School District, they observe the surrounding habitat area pointing out the changes taking place in the various plant and animal communities.

Resident Outdoor Education School Programs

The Fresno County Office conducts a one-week program through the Regional Learning Center. The program is for 6th graders and about 5,000 participate. Of the replying districts, 8 participate in resident outdoor education school programs. In Auberry Union Elementary School District, science teachers take students out of the classroom to observe and discuss the plant and animal communities surrounding the school. Sierra Union Elementary takes 6th graders on a field trip. One year they went to the coast, and one year to the mountains. Parlier Unified and Caruthers Union Elementary takes 6th graders on a field trip. One year they went to the coast, and one year to the mountains. Parlier Unified and Caruthers Union Elementary School Districts participate in the Fresno County program. Mendota Union Elementary School District operates a one-week program for grade 6, with about 120 students participating. Coalinga Unified School District operates a program for grade 6. About 189 participate in this 5 day program. In Westside Elementary School District, a vice-principal operates a one week program for 100-120 5th and 6th graders. The 5th grade students go to the mountains and the 6th grade students go to the coast.

Special Funds or Grants

The Fresno County Office has ESEA Title I and II grants. Westside Elementary School District did have ESEA Title I funds but present guidelines will not permit this. They have been able to continue their environmental education program with assistance from the Parents Club and a State Conservation Grant.

Evaluations

The County Office conducts teacher, administration and governing board evaluations of the environmental education program. Of the replying school districts, 6 conduct evaluations of their programs. Westwide Elementary School District has given pre and post surveys and tests to assist in the evaluation of their environmental program. They have sent home parent evaluations and compiled the returns. In Kerman-Floyd Union Elementary School District, a committee of teachers is meeting to set up a program on conservation and they are gathering materials for the teachers to use in the classrooms.

Glenn County

Reply Rate

The County Office and 4 of the 10 school districts replied to the questionnaire.

Publications

There are no environmental education publications in Glenn County, although Willows Unified School District is considering publishing.

Teacher Training

The County Superintendent of Schools Office has given over 138 hours of environmental education teacher training to school districts in Glenn County. The school districts mentioned their utilization of this program.

On-Site Environmental Study Areas

According to the County Office, one school is developing an on-site environmental study area and 3 others are in the planning stage. None of the replying school districts said that they had environmental study areas.

Resident Outdoor Education School Programs

Glenn County Superintendent of Schools Office conducts a one week outdoor education program, with about 230 students participating. Willows Unified, Princeton Joint Unified and Lake Elementary School Districts take advantage of this program, sending students from grades 4,5, and 6 to participate.

Special Funds or Grants

The County Office has received donations from the Kiwanis Club and Delta Gamma Upsilon Sorority. In Willows Unified School District, parent/teacher funds aid needy children with expenses of the outdoor education week.

Evaluations

In Glenn County, only Willows Unified School District is evaluating conservation and environmental education programs.

Humboldt County

Reply Rate

The County Office did not reply to the questionnaire, but 8 school districts out of 35, in Humboldt County, did.

Publications

Eureka City School District is helping classroom teachers plan class activities and prepare materials to be used in classes.

Freshwater School District has developed a filmstrip and teacher's guide for their schools' use.

Jacoby Creek Elementary School District has printed several handouts, consisting of 3-5 pages of activities used in conservation education, designed for elementary school use. These are distributed at workshops, teacher's meetings and college classes.

Teacher Training

Teachers from South Bay Union School District and Fieldbrook Elementary School District occasionally take workshops and classes on a individual optional basis. Jacoby Creek Elementary School District, Freshwater School District and Hydesville Elementary School District conduct teacher training activities for their teachers. Loleta Union Elementary School District teachers attend environmental education teacher training classes at Humboldt State College under Mr. Kip Roberti. Eureka City School District has participated in teacher training through Humboldt State College, Redwoods National Park, State Division of Forestry, and Division of Beaches and Parks.

On-Site Environmental Study Areas

There are 7 on-site environmental study areas among the replying school districts. Freshwater School District has one, and Eureka has 3 nature trails. Loleta Union Elementary School District has developed a salmon rearing pond on private property a short distance from school and is rearing 2,000 salmon in a county project. Jacoby Creek Elementary School District has one area; 5-10 acres of school property devoted entirely to conservation education and 3-4 acres of that already is a developed nature area.

Resident Outdoor Education School Programs

Of the replying school districts, 4 have resident outdoor education school programs. In South Bay Union School District, a 4th grade

class with 23 children, participated in an overnight activity. Rio Dell School District has, for three years, taken 30-45 8th grade students on a 3 day 16 mile pack trip into the Trinity Alps. This trip is oriented toward care of the environment. This year, they divided into 4 groups or camps, to provide better instruction and use of the environment.

Special Funds or Grants

There are no special funds or grants for environmental education in Humboldt County.

Evaluations

Loleta Union Elementary is conducting evaluations by working at Humboldt State College in the development of environmental education programs. Freshwater School District has not done evaluations, but would like to find a system by which to do so. In Eureka School District, evaluation takes place at the individual class and school level. Also, some interested teachers are exploring the possibility of developing a K-12 list of needs and objectives for environmental education. Jacoby Creek Elementary School District has conducted evaluations and has found that most teachers have neither the time nor interest to develop original learning activities in environmental education, but will use cookbook-type lessons when available.

Imperial County

Reply Rate

The County Office and 5 out of 16 school districts in Imperial County replied to the questionnaire.

Publications

There are no environmental education publications in Imperial County, although the County Office has a multimedia list for environmental education in its catalogue of audio-visual materials.

Teacher Training

In El Centro School District in-service teacher training is conducted at the school level by principals. McCabe Union Elementary School District participates in teacher training activities.

On-Site Environmental Study Areas

The County Office replied that there is one on-site environmental study area in Imperial County. McCabe Union Elementary School District has one area.

Resident Outdoor Education School Programs

McCabe Union Elementary School District participates in a 5 day program for grade 6 at Camp Cedar Glen. Between 30 and 40 students take part in this district operated program. Seeley Union Elementary School District sends about 58 6th graders to Camp Cedar Glen for 5 days. This program is operated by the district.

Special Funds or Grants

There are no special funds or grants for environmental education in Imperial County.

Evaluations

Some evaluation of environmental education occurs in 3 school districts and the County Office. At Imperial High School, Imperial Unified School District, subject evaluations are made by the instructors. In El Centro School District, there is frequent discussion of programs during Administrative Council meetings. The purpose is to assist in program planning and determination of the quality of the programs conducted at the school level. The Imperial County Office assists in the evaluation of state science textbooks, and states that many have chapters dealing with environmental studies.

Inyo County

Reply Rate

The County Office did not reply and only one school district out of 7 replied to the questionnaire.

Publications

The replying school district, Owens Valley Unified, has no environmental education publications.

Teacher Training

Owens Valley Unified School District teachers participate in various workshops in the field.

On-Site Environmental Study Areas

This district has no on-site environmental study areas.

Resident Outdoor Education School Programs

Owens Valley Unified School District does participate in a resident outdoor education school program.

Special Funds or Grants

They have no special funds or grants.

Evaluations

Owens Valley Unified has not conducted any evaluations of environmental education programs.

Kern County

Reply Rate

The County Office and 18 out of 51 districts replied to the questionnaire.

Publications

Kern County has published a 17-page booklet, Conservation of Our Environment, containing 13 components:

1) Program of Community Awakening
2) Program of Widening Horizons
3) Kern County Program of Outdoor Education
4) Knowledge and Materials Pool
5) Training for Science and Conservation Instruction
6) Skills Training for Young Adults
7) Arboretum
8) Children's Farm
9) Improvement of Science Instruction
10) Science-Conservation Teacher Training Program
11) Vest Pocket Park
12) Underground Zoo
13) Mobile Environmental Educational Project

The County Office is now preparing guidelines for environmental study of an ocean site area and plans to prepare materials in the future for mountain and desert locations.

Bakersfield City Unified School District is now preparing a course of study and curriculum guide with environmental education included.

Midway Elementary School District has published a report concerning the Midway-Ready Springs summer program.

Pond Union Elementary School District has prepared an environmental publication for a Title III Project.

In Taft City School District, the curriculum advisory committee is in the process of developing the basic objectives for environmental education and other parts of the educational program.

Teacher Training

The Kern County Office conducts environmental education teacher training activities. Of the replying districts, 12 either conduct or participate in teacher training. Wasco Union Elementary and Bakersfield City School Districts take part in in-service teaching programs. Richland Elementary teachers help with the SCICON, Tulare County outdoor education program, in-service meetings and Buena

Vista Elementary School District attends this orientation program. One teacher in Lakeside School District has attended an NDEA Sujmer Session on the Environment. Science teachers from Standard Elementary have received NSF grants and 2 are currently involved. Kern Joint Union High School District participates with California State College, Bakersfield in an environmental education teacher training project. Midway Elementary teachers attended a one week seminar in June 1971 at Cal Poly, San Luis Obispo.

On-Site Environmental Study Areas

Among the replying school districts, there are 5 on-site environmental study areas. In Standard Elementary School District, one junior high school has outdoor labs for animal study, botany and geology, while an outdoor aquarium is planned. Richland Elementary School District does not have an on-site environmental study area now, but an intermediate school principal is planning an outdoor classroom.

Resident Outdoor Education School Programs

Kern County operates a resident outdoor education school program. Students from grades 5 and 6 participate, spending about 5 days outdoors. The County Office estimates that about 2,000 students attend. Kernville Union Elementary, Buttonwillow Union Elementary, Wasco Union Elementary, Lerdo Elementary, Richland Elementary, and Pond Union Elementary School Districts participate in this program. Elk Hills, Buena Vista Elementary, Pond Union, and Richland School Districts participate in a resident outdoor education school program operated by Tulare County. Midway Elementary School District operates a one week program called Midway Springs Project. About 60 students from grades 5-8 attend this outdoor education program at Rough and Ready.

Special Funds or Grants

Kern County Office of Education had a special state funding project approved, but it had not yet been funded. For the 1971-72 school year, Standard Elementary School District received an NDEA II-A grant to finance construction of an outdoor aquarium. One school in Beardsley Elementary School District had an NDEA III-A Science Grant approved, but it was not specifically earmarked for environmental education. Richland Elementary School District obtained a Title I ESEA Grant. Midway Elementary School District was granted $3,200 by the State Conservation Education Committee last year.

Evaluations

The County Office has conducted a study survey to determine the students' knowledge of the desert environment. Only 5 of the replying school districts have conducted any type of evaluation

of environmental education programs. In Richland Elementary School District, 5th grade staff participates in the ongoing evaluation of SCICON, the outdoor education program sponsored by Tulare County. Kernville Union Elementary School District has conducted some limited survey and has received comments on their environmental program. Midway Elementary School District is currently beginning a science program with assistance from an oil company. The objective is to find plant life that will survive and use waste water from oil producing wells.

Kings County

Reply Rate

The County Office, but none of the 14 school districts, replied to the questionnaire.

Publications

Kings County has prepared a publication on environmental education, Field Trips and Environmental Education - Camp Redwood.

Teacher Training

Kings County conducts and participates in environmental education teacher training activities through in-service and college course offerings.

On-Site Environmental Study Areas

Kings County has one on-site environmental study area.

Resident Outdoor Education School Programs

Kings County Schools Office operates a resident outdoor education school program for 6th graders. About 3,000 students participate in this one week program.

Special Funds or Grants

Kings County has not received any special funds or grants.

Evaluations

Evaluations are made yearly by the Environmental Educational Council.

Lake County

Reply Rate

The County Office and one out of 7 of the school districts, in Lake County, replied to the questionnaire.

Publications

Lake County has no environmental education publications.

Teacher Training

The County Office conducts environmental education teacher training in-service courses. Kelseyville Unified School District teachers have been taking available environmental courses.

On-Site Environmental Study Areas

Lake County is in the process of developing an on-site environmental study area. Kelseyville Unified does not have one, but has been using an available State Park nature trail.

Resident Outdoor Education School Programs

There are no resident outdoor education school programs, although the County Office is studying the possibility of developing one.

Special Funds or Grants

Lake County has no special environmental funds or grants.

Evaluations

The County Office is studying possible environmental education programs.

Lassen County

Reply Rate

The County Office and 3 out of 12 school districts, in Lassen County, replied to the questionnaire.

Publications

Westwood Unified School District is trying to get funding through the County Office for making a film on conservation in their area.

Teacher Training

The County Office participates in some environmental education teacher training activities. A Westwood Unified School District teacher conducts a night class for adults in ecology.

On-Site Environmental Study Areas

The County Office replied that there are 2 on-site environmental study areas in Lassen County. In addition, the Eagle Lake District of the U.S. Forest Service has developed a day camp. Big Valley Joint Unified has one environmental site adjacent to an elementary science room. Janesville Union School District has a nature trail.

Resident Outdoor Education School Programs

There is no participation in resident outdoor education school programs in Lassen County.

Special Funds or Grants

Westwood Unified School District is trying to get a $500 grant from the County.

Evaluations

Westwood Unified conducted student surveys last year regarding vocational and environmental education.

Los Angeles County

Reply Rate

The County Office and 32 out of 81 school districts replied to the questionnaire.

Publications

The Los Angeles County Office is developing a revision of their Nature's Classroom outdoor school guide. They have published a brochure describing the Los Angeles County Outdoor School Program. Now they are in the organizational stages of preparing a teacher training guide for conservation and environmental eudcation. The Office has issued lists of books approved for supplemental reading related to conservation and environmental concerns and published up-to-date listings of films available from the Educational Media Section of the Office.

A curriculum guide, published by Torrance Unified School District, is being field tested in 5 of their schools.

Santa Monica Unified School District is preparing an environmental education publication.

Paramount Unified School District has published a syllabus on basic mountaineering.

Newhall Elementary School District has 3 publications. They are Wildlife - Conservation and Conservation Unit Most Appropriate for Grade 6 and Water Conservation and Oceanography - Tide Pool Study.

Montebello Unified School District is preparing detailed units for high school teachers. They are also preparing a list of materials available to the District Library and Audio-Visual Department for elementary teachers.

Lancaster Elementary School District has prepared environmental education kits for every grade level in every school.

Covina-Valley Unified School District is preparing a K-3 and a 4-6 ecology kit, a reference and resource guide on environmental and conservation education. This is being developed in cooperation with a local service organization.

ABC Unified School District is in the process of developing course materials for high school use.

Teacher Training

Of the replying school districts, 25 participate in teacher training activities such as classes, conferences and workshops.

Claremont School District receives teacher training through the Audubon Society, Neighbor's Nearby and other environmental groups.

In Bonita Unified School District, 2 staff members participated in a U.S. Office of Education Conservation Education Teacher Training Program in Tempe, Arizona.

In Arcadia Unified School District, 4 teachers are participating in a National Science Foundation Institute on Human Ecology; several others are participating in elementary institutes.

Covina-Valley Unified School District has participated in a workshop sponsored by the U.S. Forest Service.

In Little Lake City Elementary School District, articulation meetings for grades 6, 7 and 8 are conducted as well as grade level meetings for grades K-5.

About 30 elementary teachers in Pasadena Unified School District have participated in a University of California at Los Angeles and Pasadena City College Ecology course.

Sulphur Spring Union Elementary held a 3 day conservation workshop for teachers during the 1970-71 school year.

In the secondary level of Pasadena Unified School District, environmental teacher training occurs periodically as part of district-wide meetings for science teachers. The Pasadena Conservation Committee has been inactive for 3 years due to the lack of a Science Consultant. This committee did have every school represented and meetings were held with members of governmental agencies and environmental groups to inform teachers of existing problems and programs and suggest methods of presenting this information in the schools.

On-Site Environmental Study Areas

The Los Angeles County Office estimates that between 10 and 15% of the schools have some kind of environmental study area on the school grounds. Among the replying school districts there are 25 on-site environmental areas.

In Bellflower Unified School District, one elementary school is developing an area designated as the Nature Study Trail.

In Pasadena Unified School District there is a plot 50 ft. by 140 ft. that is used by several classes and is secured by a 12 ft. chain-link fence. At the same school there is a student operated Reclamation Center where the community brings paper, aluminum and glass for recycling. Funds received from this operation are spent for speakers, films and environmental projects. There is also an undeveloped 5 1/2 acre area adjacent to the school that is used by several classes on an informal basis. Lack of security from vandalism is the main restraint on further development of this land. One Jr. High School also has a plot of ground that is periodically used in environmental studies.

Sulphur Springs Union Elementary School District has developed an environmental study area with the assistance of the U.S. Forest Service and Pasadena City College.

Two of the school districts didn't understand the question.

Resident Outdoor Education School Programs

Of the replying school districts, 11 have some type of resident outdoor education school programs. The County Office operates a one week 6th grade program. Between 2,000 and 3,500 students participate.

Santa Monica Unified School District participates in a one week program for grade 6 operated by Los Angeles County. In 1972, 550 students participated and it is planned that 1,200 will participate in 1973.

Little Lake City Elementary School District operates a one week summer program in the mountains. Children participate from grades 4, 5, and 6.

Paramount Unified School District takes 40 secondary students on a 13 day wilderness trip.

ABC Unified School District did have a resident outdoor education school program but was forced to drop it due to lack of funds.

Wiseburn Elementary School District participates in a one week program involving about 300 6th graders.

Garvey Elementary School District operated a Title I Program in the 1970-71 school year only. About 100 5th graders participated in this one week program.

Pomona Unified School District participates in a one week program operated by Baptist Church Camps. About 75 6th graders take part.

Monrovia Unified School District sends children on ecology trips.

Bellflower Unified School District, grades 9-12 has participated in weekend trips. The Expanded School Program began operating in the spring of 1971 and offers 2 courses entailing resident outdoor education.

1) Desert Exploration - 4 weekend trips to the high and low desert areas. The enrollment is limited to 20.
2) Orientation to Mountain Environment - a series of weekend trips culminating in a final 7-10 day expedition to Baja California, Mexico. This class (10 units) is offered in cooperation with the Outward Bound Adventures and about 70 take part.

Special Funds or Grants

The County Office used Title III funds in developing the draft of a list of free and inexpensive conservation education materials which has been revised and printed by the State Department of Education. Currently a teacher's guide on conservation is being developed with funds from the Conservation Education Grant Program.

Newhall Elementary School District receives minimal funds for teacher education only, including some materials and film.

Azusa Unified School District has applied for project funds to prepare and label a nature study trail in San Gabriel Canyon for elementary school pupils.

Pasadena Unified School District, elementary level, now has a project proposal in preparation.

Garvey Elementary School District received Title I funds for a summer program for the 1970-71 school year.

Pasadena Unified School District, secondary level has a funding proposal currently under consideration under Environmental Education Public Law 91-516, in cooperation with Outward Bound Adventures.

Evaluations

The County Office replied that a committee of educators and high school students planned a study intended to provide an inventory of programs in Los Angeles County - this work has not yet been completed. Preliminary work, however, indicates that many districts and schools are fostering conservation and environmental education as part of the regular curriculum, as well as in extra-curricular activities. Of the replying school districts, 13 conduct some evaluation of their environmental programs.

In Montebello Unified School District, student opinionnaires are widely used. Students are not only asked to evaluate, but to

suggest ways of improving the unit. These opinionnaires form the bases for revision of units.

ABC Unified School District conducts a detailed evaluation of their outdoor education program for 6th grade students.

Paramount Unified School District operates a program called American Wilderness, culminating in a 13 day trip for secondary students. They feel that this program, by its very nature, is self-evaluating.

Through evaluation, Rosemead Elementary School District has updated its conservation program and week of lectures to the current needs.

Madera County

Reply Rate

The County Office and 3 out of the 12 school districts in the county replied to the questionnaire.

Publications

Madera Unified School District has compiled a large selection of environmental education materials including completed lesson plans and comments on all aspects of conservation in their area.

Teacher Training

The County Office participates in environmental education teacher training programs when they are available.

Chowchilla Union High School District has had staff members attend the NSF Environmental Education Summer Institute.

Madera Unified School District personnel take extension courses through Fresno State College.

On-Site Environmental Study Areas

According to the County Office, there is only one on-site environmental study area, but many other schools are considering them.

Resident Outdoor Education School Programs

The Madera County Office operates a one week outdoor education school program. About 120 6th graders participate.

About 55 students from Madera Unified School District take part in this county program.

Special Funds or Grants

Madera County is a member of the Area IV Regional Project for Conservation Education.

Evaluations

The County Office has evaluated several environmental education programs.

Marin County

Reply Rate

The County Office of Education and 10 of the 19 school districts in the County replied to the questionnaire.

Publications

The County Office hopes to prepare a resource guide and directory for Environmental Education in Marin County.

Lagunitas School District is preparing a curriculum guide for a nature study program for grades K-8.

Novato Unified School District wrote and published a Multi Graded Conservation Education Summer School Model in 1970 under a State of California grant.

Ross Elementary School District has written an environmental education curriculum guide and additional material is in preparation.

Teacher Training

The Marin County Office of Education plans to conduct environmental education teacher training activities. Of the replying school districts, 8 either conduct or participate in environmental teacher training activities. Lagunitas School District has a nature study program which involves all members of their staff. In Mill Valley Elementary School District selected teachers are part of an "On Location" Teacher Training Program sponsored at San Francisco State College.

On-Site Environmental Study Areas

There are 7 on-site environmental study areas among the replying school districts in Marin County. Sausalito Elementary School District is planning a study area. One school district didn't understand the question.

Resident Outdoor Education School Programs

Marin County Office of Education operates a one week resident outdoor education school program. About 2,500 6th graders participate in the program. Of the replying school districts, 4 participate in this county outdoor program. Shoreline Unified School District operates a one week program in conjunction with the Sonoma County Outdoor Education Association. About 110 students participate in this program for grades 6, 7 and 8.

Special Funds or Grants

Lagunitas School District receives Marin Audubon Society funds. Laguna Joint Elementary School District receives a portion of Title I funds. Kentfield receives funds for resident outdoor education programs and for the release of teachers for local training.

Evaluations

Only 2 of the replying school districts conduct evaluations of environmental programs. In Ross Elementary School District the environmental program is evaluated by teachers, students and parents. In Mill Valley Elementary School District, local schools are constantly evaluating their entire programs.

Mariposa County

Reply Rate

The one school district in the county, Mariposa County Unified School District, replied to the questionnaire.

Publications

There are no environmental education publications in Mariposa County.

Teacher Training

They participate in environmental education teacher training activities whenever they become available in nearby areas.

On-Site Environmental Study Areas

One school is located in Yosemite Valley and thus is surrounded by an environmental study area of a sort.

Resident Outdoor Education School Programs

Last year a 2 day pilot camping program was tried for grades 5 and 6, operated by Mariposa County Schools and Woodland School.

Special Funds or Grants

Mariposa County has received no special funds or grants.

Evaluations

They conduct only very informal evaluations of environmental programs.

Mendocino County

Reply Rate

The County Office and 3 out of 9 school districts in the county replied to the questionnaire.

Publications

Round Valley School District developed a brochure on Agriculture, Recreation and Conservation.

Teacher Training

Mendocino County Office is involved in environmental teacher training activities through Sonoma State College Extension Division. They offer college credit courses and conduct workshops. Anderson Valley Unified School District takes part in this program. Round Valley School District organized a college workshop in Recreation and Conservation for 1968 and 1969.

On-Site Environmental Study Areas

The County said there is only one environmental study area in the County, in Ukiah Unified School District, but Willitts Unified School District said they have 2 and Round Valley School District has an environmental study area in the planning stage.

Resident Outdoor Education School Programs

The science department of Willitts Unified School District operates a one week summer school program. About 50 students from grades 7-12 participate. Round Valley School District has participated in barbeques and trailrides.

Special Funds or Grants

There are no special funds or grants in Mendocino County.

Evaluations

Round Valley School District continues to evaluate and improve their programs each year.

Merced County

Reply Rate

Merced County Office and 9 of the 22 school districts replied to the questionnaire.

Publications

The County Office prepared materials pertaining to their outdoor school programs. They are now preparing more information to cover a wider scope.

Dos Palos Joint Union School District is preparing various tools for classroom use and for field trips, although these materials will not be published for general distribution.

Teacher Training

Of the replying school districts, 7 either conduct or participate in environmental teacher training programs. The County conducts a teacher training program in preparation for their one week outdoor education program.

On-Site Environmental Study Areas

The County Office replied that there are 2 fairly well-developed on-site environmental study areas in the county. A few other schools have expressed an interest in them, but haven't begun as yet. Los Banos Unified School District, replied that they have 6 study areas, but they may have misunderstood the question. Newman-Gustine Joint Unified School District has an environmental study area in the developmental stage.

Resident Outdoor Education School Programs

Merced County operates a one week resident outdoor education school program. About 2,000 students from grades 5 and 6 participate. All the replying school districts participate in this county program.

Special Funds or Grants

None of the replying school districts have any special funds or grants but Merced County is involved in a 10 county project in environmental education which has a small grant from the state.

Evaluations

Hilmar Unified School District conducts informal evaluations of both students and professional staff, as well as the community. In

Snelling-Merced Falls Union Elementary School District, camping at Green Meadows has been followed by evaluation in the form of reports and exams.

Modoc County

Reply Rate

The County Office and one of the 2 school districts replied to the questionnaire.

Publications

In Modoc-Tulelake Joint Unified School District, district personnel prepared a Conservation Education Curriculum Guide 2 years ago. This guide is now being used in the district.

Teacher Training

The County Office is involved in environmental education teacher training activities and Modoc-Tulelake Joint Unified School District replied that 3 conservation education workshops have been held during the past 3 years.

On-Site Environmental Study Areas

The County Office replied that there is one on-site environmental study area in the county.

Resident Outdoor Education School Programs

The County Office replied that there is a one week program operated by Modoc-Tulelake Joint Unified School District. About 50 6th graders participate.

Special Funds or Grants

There are no special funds or grants in Modoc County.

Evaluations

Modoc-Tulelake Joint Unified School District carries out informal evaluations.

Mono County

Reply Rate

The County Office and 2 of the 6 school districts in the county replied to the questionnaire.

Publications

The County Office is developing guidelines and basic curriculum for conservation and environmental education.

Mammoth Elementary School District is in the process of developing a publication in connection with their outdoor education program and environmental study area.

Teacher Training

The County Office conducted a 2 week workshop and 4 days of it were utilized in the field of conservation and environmental educationeducation. An Antelope Union Elementary School District teacher has attended in-service workshops.

On-Site Environmental Study Areas

Mammoth Elementary School District has one on-site environmental study area.

Resident Outdoor Education School Programs

There are no resident outdoor education school programs in Mono County.

Special Funds or Grants

Mono County schools have no special funds or grants.

Evaluations

The County Office conducts evaluations of environmental programs. They are assisting Mammoth Elementary School District in their program for establishing an on-school conservation education site. Work is also being conducted with the U.S. Forest Service for the preparation of environmental education material to be utilized by both lay persons and educators.

Mammoth Elementary School District saw a lack of environmental education in their school and has started to correct it.

Monterey County

Reply Rate

The County Office, along with 6 of the 25 school districts, replied to the questionnaire.

Publications

The Monterey County Office of Education plans a series of brief publications on the following subjects: Protection of Tidal Zone of Monterey Bay, Field Guide to Hartnell Campus and Central Park as an Environmental Study Area for Students, Family Outings to Environmental Study Areas, various bibliographies and Resource Guides, Handbook on Outdoor Education and Handbook for Cabin Teachers.

Gonzales Union High School District has published a resource list and bibliography of environmental materials.

Teacher Training

The County Office conducts inservice environmental education workshops for individual schools and districts. They also participate in workshops conducted by other groups or agencies. All the replying school districts participate in environmental education teacher training activities, mainly in the County operated program. Monterey Peninsula Unified School District staff attended an extensive in-service education program conducted last spring in conjunction with Hopkins Marine Laboratories and the American Association of University Women.

On-Site Environmental Study Areas

According to the County Office of Education, there are 5 or 6 on-site environmental study areas in the county. These are usually nature trails or small study areas for primary grades. Among the replying school districts there are 5 such study areas.

Resident Outdoor Education School Programs

Monterey County Office of Education operates a one week program for 6th graders. An approximate 2,600 students participate. Of the replying school districts, 5 participate in this county outdoor education school program. Gonzales Union High School District has a 4 week summer school program for grades 9-12 and about 32 students participate. For the program, 5 ecosystems are selected and each student does an individualized project.

Special Funds or Grants

There are no special funds or grants in Monterey County.

Evaluations

For the County Office of Education, the Monterey County Advisory Council for Environmental Education, evaluates instructional materials on an informal basis. Also, 3 of the replying school districts conduct evaluations of environmental programs.

Napa County

Reply Rate

The County Office, but none of the 5 school districts, replied to the questionnaire.

Publications

There are no environmental education publications in Napa County.

Teacher Training

The County Office conducts a teacher workshop in environmental education and has purchased for use by the teachers, a "Pollution Kit" for grades 1-8 from the Penn TB and Health Association.

On-Site Environmental Study Areas

There are no on-site environmental study areas in the county.

Resident Outdoor Education School Programs

They do not operate or participate in any resident outdoor education school programs.

Special Funds or Grants

Napa County has no special funds or grants for environmental education.

Evaluations

There has been no evaluation of environmental education programs.

Nevada County

Reply Rate

The County Office and only one of the 12 school districts in the county replied to the questionnaire.

Publications

There are no environmental education publications in Nevada County.

Teacher Training

The County Office has held a workshop for teachers. They also provide teacher assistance during the year on an individual basis as needed.

On-Site Environmental Study Areas

According to the County Office there are 2 environmental study areas in the county. One is a nature trail and one is a school ground beautification project. Another district is now planning a study area.

Resident Outdoor Education School Programs

There are no resident outdoor education school programs in Nevada County.

Special Funds or Grants

Nevada County has not received any special funds or grants.

Evaluations

There has been observation of conservation activities by both school personnel and Nevada County Conservation Council members. There has been some informal use of the booklet "Evaluating: A Program of Conservation Education in the Elementary School" published by the Conservation Education Association.

Orange County

Reply Rate

The County Office and 14 of the 29 school districts replied to the questionnaire.

Publications

The County Office is preparing an Administrator's and Teacher's Guide for Environmental Education.

Anaheim City Elementary School District has prepared telelesson guides for teacher use which describe followup activities to T.V. lessons on conservation and the environment, ecology, pollution and the interrelationship of man and his environment. Additional materials have been prepared for student and teacher use during summer sessions.

Many of the schools in Anaheim Union High School District offer environmental science courses and prepare study guides and learning activity packages for students.

Centralia Elementary School District has materials in booklet form covering classroom materials for Earth Week.

Fullerton Elementary Schools are developing several units on conservation education to be used district wide.

Fullerton Union High School District has developed a new course of study on ecology and conservation, an interdisciplinary approach.

Newport-Mesa Unified School District is preparing an environmental education publication.

Ocean View Elementary School District is currently in the process of preparing curriculum for an environmental learning center.

Santa Ana Unified School District is preparing an elementary school level district guide for use in all the schools.

Garden Grove Unified School District has published litterbug materials.

Teacher Training

The Orange County Office conducts environmental education workshops. They also duplicate and distribute upon request pertinent education resources. Of the replying school districts, 10 conduct or

participate in environmental education teacher training activities. Westminster Elementary School District representatives have attended County and State activities. Savanna Elementary School District conducted an environmental seminar for summer school teachers in 1970. Anaheim Union High School District formed an Environmental Education Committee to coordinate their efforts. Centralia Elementary School District participates in U.C. Irvine extension classes. Fullerton Elementary School District conducts field trips to areas of environmental concern and interest within Orange County to familiarize teachers with background information, speakers and classroom demonstrations on environmental education. Ocean View Elementary School District teachers attend conferences held by the Sierra Club and the Orange County Environmental Education Advisory Council.

On-Site Environmental Study Areas

According to the County Office, 6 schools in the county have on-site study areas and more schools are contemplating them. Among the replying school districts there are 13. Garden Grove has 5 study areas. The most comprehensive program presently under way in the district is Walton Pond at Walton Intermediate School. In Anaheim City Elementary School District, most schools are adjacent to parks where some formal learning situations are conducted by teachers and park personnel. In Centralia Elementary School District, there is an outdoor environmental center in the planning stage at one school and a teacher prepared trail at another school.

Resident Outdoor Education School Programs

Fullerton Elementary School District operates a one week outdoor program at Camp LaVerne. About 80 students from grades 4 and 5 participate in this program.

Special Funds or Grants

Fullerton Elementary School District has a Title I grant which is used to operate the one week outdoor program.

Garden Grove Unified School District receives MGM funds.

Evaluations

The County Office and 5 of the replying school districts have conducted environmental education evaluations. In Garden Grove Unified School District, Environmental Problems, a 5 credit multiple course, is presently being field tested in 3 district schools. This is a pilot project and as such is being evaluated according to standard district procedure. Environmental Protection

Month was informally evaluated by teachers, administrators and community leaders. Anaheim Union High School District has recently made a survey on Conservation Education practices. In Anaheim City Elementary School District, during the summer session, parents and students were asked to evaluate the program.

Placer County

Reply Rate

The County Office and 4 of the 19 school districts in the county replied to the questionnaire.

Publications

Placer County Office of Education has publications in the following areas: Status Report on Conservation Programs in California, Marine Biology, Organic Gardening, Area III Science Project, and Environmental Sampling Techniques.

Foresthill Union Elementary School District is gathering information from the community for preparation and development of a curriculum which will include environmental education.

Roseville City Elementary School District has developed a Study Guide for Conservation.

Teacher Training

The County Office conducts local and regional teacher workshops and conferences on environmental education. Of the replying 4 school districts, 2 participate in environmental education teacher training activities.

On-Site Environmental Study Areas

According to the County Office, there are 6 on-site environmental study areas in the county. They are hoping to increase the number of such areas, but maintenance problems scare administrators.

Foresthill Union Elementary School District has a one acre wooded area which they would like to develop further as a study area. Unfortunately, they do not have the resources.

One school in Loomis Union School District hopes to adapt science trails.

Resident Outdoor Education School Programs

Placer County participates in a one week program for grade 6. The facility, Sly Park, is operated by Sacramento County and 200-300 students participate.

Special Funds or Grants

There are no special funds or grants in Placer County.

Evaluations

The County Office has taken a survey of all outdoor education programs in California with personal visits to a few. They are currently reviewing and evaluating textbooks for environmental information.

Tahoe Truckee Unified School District is forming committees which will consider environmental issues along with others. Roseville City Elementary School District expects to do some environmental education evaluations in the next year.

Plumas County

Reply Rate

The County Office and the one school district replied jointly to the questionnaire.

Publications

Plumas Unified School District is in the process of developing functional Learning Paths in conservation education.

Teacher Training

Plumas Unified School District participates in High Point Institutes involving the U.S. Forest Service, U.S. Soil Conservation Service and the Department of Fish and Game.

On-Site Environmental Study Areas

There are 4 on-site environmental study areas in the county, 3 at elementary schools and one at a secondary school.

Resident Outdoor Education School Programs

There are no resident outdoor education school programs in Plumas County.

Special Funds or Grants

There are no special funds or grants in the county.

Evaluations

Evaluations on outdoor education and recreation have been made for local use.

Riverside County

Reply Rate

The County Office and 8 of the 28 school districts in the county replied to the questionnaire.

Publications

The County Office, through their Environmental Education Project, is developing and field testing interdisciplinary ECO-Units for elementary and secondary school use, informational and activity booklets for primary grade children, Learning Activity Packages for individualized instruction and a sourcebook of teaching ideas and student activities (Ecology Grabbers).

Hemet Unified School District has prepared an environmental education publication.

Teacher Training

The County Office co-sponsors an annual Environmental Education Conference at the University of California at Riverside. They sponsored a conference for the National Science Teachers Association in 1971. They provide training programs for key teachers in the Riverside County Environmental Education Project.

Of the replying school districts, 5 either conduct or participate in environmental education teacher training activities. Hemet Unified School District developed a conservation workshop in cooperation with the U.S. Forest Service.

On-Site Environmental Study Areas

The County Office estimates that there are 5 on-site environmental study areas in the county. Among the replying school districts, there is one completed study area, one in the developmental stage, and one in the planning stage.

Resident Outdoor Education School Programs

The County Office replied that it did have a resident outdoor program, but it was taken over by Albord School District.

Dervis Union High School District participates in a school operated program. About 60 students take part from grades 7, 8, and 9.

Banning Unified School District operates a program lasting 2 days and 2 nights for grade 5. This program is for summer session only and 90-100 students participate.

Palo Verde Unified School District participates in an outdoor program for grades 4-6 and about 90 students take part. It is operated by West San Gabriel YMCA, although the school district provides instructional and camp staff.

Special Funds or Grants

The County Office used County Service Funds for the Riverside County Environmental Education Project.

Banning Unified School District is partially financed by Title I ESEA.

Evaluations

The County Office has plans underway to evaluate the materials and programs being developed by the County Environmental Education Project.

Of the replying school districts, 2 have conducted evaluations of environmental education programs.

Sacramento County

Reply Rate

The County Office and 6 of the 16 school districts in the county replied to the questionnaire.

Publications

The County Office has prepared environmental education publications, including the Field Guide to Plants and Animals of the Sacramento Valley.

Sacramento City Unified School District plans to prepare a nature study handbook in connection with a science project to be entitled "Discovery Trips".

San Juan Unified School District was to prepare a curriculum guide during the 1971-72 school year.

Folsom-Cordova Unified School District is preparing an environmental education publication.

Teacher Training

The County Office conducts environmental education teacher training activities on a district level with teachers and principals. They also take part in Area III teacher training.

Sacramento City Unified School District has had in-service sessions for teachers at the Bowling Green Arboretum.

San Juan Unified School District conducts tours of on-site outdoor learning centers, workshops for teachers and participates in an Area III Science Project.

On-Site Environmental Study Areas

The Sacramento County Office of Education estimates that there are 40-50 on-site environmental study areas in the county.

Among the replying school districts, there are 25 environmental areas. In Grant High School District a natural area has been developed and enhanced with native plants.

Resident Outdoor Education School Programs

The County Office of Education conducts a one week outdoor program at Sly Park. About 4,000 6th graders participate. All the replying elementary school districts take part in this program.

In addition to sending students to Sly Park, San Juan School District is involved in an outdoor education program at Camp Arcade.

Special Funds or Grants

The County Office has a State Grant for a Study of Sly Park Operations in 1971. Elverta School District has special funds earmarked for Sly Park visitation.

Evaluations

The County Office and one of the replying school districts conduct environmental education evaluations. Sacramento City Unified School District makes written, subjective evaluations after each field trip.

San Benito County

Reply Rate

The County Office and 4 of the 13 school districts in the county replied to the questionnaire.

Publications

There are no environmental education publications in San Benito County.

Teacher Training

The County Office conducted and participated in environmental education teacher training. They took part in the planning of the Area V sponsored Asilomar Environmental Education Conference in May 1970 but the conference was cancelled due to poor response. San Juan Union Elementary School District furnishes teachers with available materials. Hollister School District conducts and participates in teacher training activities.

On-Site Environmental Study Areas

There are no on-site environmental study areas in San Benito County.

Resident Outdoor Education School Programs

No resident outdoor education school programs are conducted.

Special Funds or Grants

No special funds or grants have been received in San Benito County.

Evaluations

Jefferson Elementary School District has done some evaluation of talks by National Park Naturalists, field trips and films.

San Bernardino County

Reply Rate

The County Office and 17 of the 32 school districts in the county replied to the questionnaire.

Publications

Barstow Unified School District has published handbooks and materials for use in the Desert Research Station. An article, "Conversing With Nature", was published in the California Science Teacher's Journal, October 1971.

Hesperia Elementary School District is preparing a guide to their Outdoor Education unit, listing resources and goals.

Ontario-Montclair School District prepared a Handbook on Conservation for teachers in 1970.

Rim of the World Unified School District recorded an audio-visual filmstrip called the Program and Loose Leaf Books Depicting the Projects of the 1970-71 Ecology Class.

Teacher Training

The County Office of Education both conducts and participates in environmental education teacher training activities. Of the replying school districts, 9 either conduct or participate in environmental teacher training.

Adelanto School District has a district committee on ecology which is responsible for materials and in-service meetings which include outside speakers. The district personnel have favorably received this program.

In Barstow Unified School District, all science teachers of grades 5-10 receive in-service training on the use of the Desert Research Station facilities.

Hesperia Elementary School District has spent 4 saturdays in workshops with their staff at the Methodist Camp in Wrightwood which they use for their outdoor education program. They have also conducted 7 meetings in preparing materials for use and for book selection.

On-Site Environmental Study Areas

Among the replying school districts, there are 8 environmental study areas and one in the planning stage.

Bear Valley Unified School District has developed an arboretum of indigenous trees at a junior high school.

Rim of the World Unified School District has developed a nature trail area adjacent to the school.

In Barstow Unified School District all 20 schools use the 120 acre site at the district's Desert Research Station. Here the students field test hypotheses they have developed in the classroom in preparation for the trip to the research station.

Resident Outdoor Education School Programs

Oro Grande Elementary School District participates in a 3 day program operated by Rialto Unified School District. About 25 6th grade students attend.

Etiwanda School District participates in a one week program operated by Los Angeles County Schools and about 50 6th graders take part.

Hesperia School District operates a one week program by arrangement with the Methodist Conference at the Methodist Camp in Wrightwood. About 150 6th grade students attend.

Special Funds or Grants

A high school science instructor in Needles Unified School District has an NDEA Title II grant for a pollution study.

Evaluations

The County Office of Education has surveyed the county agencies that are available for service to districts.

Rim of the World Unified School District has received subjective evaluations of their environmental education program from the U.S. Forest Service and the community. They also check the survival rate of the trees they have planted.

In Hesperia Elementary School District, all the staff participating in the outdoor education camp, evaluate the program upon their return.

San Diego County

Reply Rate

The County Office and 20 of the 41 school districts in the county replied to the questionnaire.

Publications

In Chula Vista City Elementary School District one of the teachers developed conservation material which was published and distributed to all the schools in the district.

La Mesa-Spring Valley School District is participating in a 3 district study of the "Relationship of Human Values to Conservation Practices". They have developed a Camp Kit, an Animal Lending Library and a Teachers Resource Kit on Ecology.

Oceanside Unified School District developed a course of study on ecology as an 8th grade elective.

Ramona Unified School District is preparing a pamphlet which will relate to local and surrounding opportunities in conservation. This pamphlet will supplement regular textbooks and other materials currently used by classroom teachers. San Diego Unified School District prepared a teaching unit for grade 6 entitled, "Man and His Environment".

Santee Elementary School District has prepared a publication, Environmental Education: A Teacher's Guide With Inquiry and Value Seeking Strategies. It has been financed with a California State Conservation Education Grant.

Vista Unified School District has prepared field trip guides.

Teacher Training

The San Diego County Office of Education conducts many environmental education teacher training courses through San Diego State College Extension.

Of the replying school districts, 16 either conduct or participate in environmental education teacher training activities.

Last year, Chula Vista Elementary Educational Association Curriculum Committee sponsored a Conservation Workshop attended by many teachers. On Professional Growth Day last spring one session was devoted to the environment. They are currently offering an environmental education course in the district. Curriculum staff members provide consultant service and materials.

On-Site Environmental Study Areas

The County Office estimates that there are over 24 environmental study areas in San Diego County. Amont the replying school districts there are 47 on-site environmental study areas. In Chula Vista City Elementary School District 9 schools have begun projects of grassed and planted areas and care of the site involving pupils and community agencies and groups. La Mesa-Spring Valley School District has an environmental study area called Ecology Canyon.

Poway Unified School District has one study area in the planning stage.

San Diego Unified School District has 20 on-site environmental study areas and Mission Bay High School uses Mission Bay for marine studies. Neighborhood canyons and tide pools are popular outdoor education study areas.

Resident Outdoor Education School Programs

The San Diego County-City Camp Commission operates a one week outdoor program for grade 6. About 19,000 students participate. Of the replying school districts, 8 participate in this program. Encinitas Union Elementary School District participates in a one week program operated by La Mesa-Spring Valley School District and San Diego County. About 200 6th graders participate. In Vista Unified School District 3,000 students from all grades participate in a program operated by principals and instructors.

Special Funds or Grants

The San Diego County Office of Education has a 1971-72 federal grant to hel p establish a County Schools Center for Environmental Education.

Santee Elementary School District receives a California State Conservation Education Grant to finance a teacher's guide for environmental education.

Chula Vista City Elementary School District receives a California State Conservation Education Grant for $5,000.

'ista Unified School District has received limited funds for environmental education.

Evaluations

The County Office does not currently conduct evaluations of environmental education programs, but hopes to do so soon.

Of the replying school districts, 7 have evaluated environmental education programs.

Cajon Valley Union Elementary School District has conducted a survey of school by school involvement in environmental education. They see a need for a systematic sequential district conservation program for grades K-8.

In Chula Vista City Elementary School District, the camping program has been in existence for more than 25 years and has been evaluated and documented in published materials.

San Francisco County

Reply Rate

The Office of the San Francisco County Superintendent of Schools and San Francisco Unified School District, the only school district in the county, replied to the questionnaire.

Publications

Multi-media programs are in preparation to be used in conjunction with the Nature Trails.

Teacher Training

Approximately 400 hours of environmental education teacher training have been conducted.

On-Site Environmental Study Areas

There are 10 on-site environmental study areas in the county, which include 4 nature trails.

Resident Outdoor Education School Programs

There are no resident outdoor education school programs in San Francisco County.

Special Funds or Grants

San Francisco County currently has no special funds or grants although their environmental education program was initiated under an ESEA III Grant (now expired).

Evaluations

Evaluation was built into the initial program and the results have been overwhelmingly favorable by both students and teachers.

San Joaquin County

Reply Rate

The County Office and 7 of the 18 school districts in the county replied to the questionnaire.

Publications

The County has published 2 pamphlets, "Redwood" and "Ferns and Their Allies". Lodi Unified School District has prepared an environmental education publication.

Teacher Training

Of the replying school districts, 5 either conduct or participate in environmental education teacher training activities.

On-Site Environmental Study Areas

Among the replying school districts there are 4 on-site environmental study areas. Lincoln Unified School District has an organic garden.

Resident Outdoor Education School Programs

The San Joaquin County Office of Education operates a one week outdoor education program and about 3,600 6th graders take part. All the replying school districts participate in this county program.

Special Funds or Grants

Stockton City Unified School District obtained ESEA Title I funds to send pupils to the outdoor education camp.

Evaluations

The County Office has done informal cabin counselor evaluations of their resident outdoor program. They are now looking for a method to measure the interest, attitude and concept changes in the students. Lincoln Unified School District conducts yearly evaluations of the outdoor education program. They also conduct ongoing revision of general science curriculum to include more environmental education.

San Luis Obispo County

Reply Rate

The County Office and 3 of the 14 school districts in the county replied to the questionnaire.

Publications

The County Office has published Environmental Education Kits for use by teachers with pupils before, during and after field trips to Rancho El Chorro Campus and Piedras Blancas Marine Station. They are currently preparing a handbook, ideas book, resource manual, and teacher's manual for use at Piedras Blancas Marine Station.

Teacher Training

The County's Rancho El Chorro and Piedras Blancas sites have been used for teacher training. The County Office has also cooperated with the California Outward Bound School in putting on 2 workshops for teachers at locations in San Luis Obispo County and in the High Sierras. County staff members have participated in various environmental education training programs. One of the 3 replying school districts participates in environmental teacher training activities.

On-Site Environmental Study Areas

According to the County Office, there are 2 on-site environmental study sites, El Chorro Campus and Piedras Blancas Marine Station, in San Luis Obispo County. One of the school districts replied that is has an environmental study area.

Resident Outdoor Education School Programs

The County Office conducts outdoor education programs ranging from one day to 3 weeks for grades 4-12.

Cayucos Elementary School District participates in a 3 day county program in which about 30 4th graders take part.

Special Funds or Grants

There are no special funds or grants in San Luis Obispo County.

Evaluations

In the County Office of Education, participants evaluate each program and future programs are modified as based upon evaluation results.

San Mateo County

Reply Rate

The County Office and 9 of the 23 school districts in the county replied to the questionnaire.

Publications

The San Mateo County Office of Education is considering the development of guides in the areas of marine-based environmental studies, land-based studies and atmospheric studies.

Laguna Salada School District has published a booklet called Ecology, which lists books, periodicals, filmstrips, kits, films and other materials, on ecology.

Woodside School District is preparing a curriculum guide for 6th grade and is field testing it in an outdoor classroom this year.

Teacher Training

The County Office conducts teacher training activities related to the Outdoor Education program and to marine sciences.

Of the replying school districts, 6 either conduct or participate in environmental education teacher training activities. Several of the 6 participate in the county program.

Sequoia Union High School District participated in an environmental education workshop at the University of California at Berkeley.

On-Site Environmental Study Areas

There are 5 on-site environmental study areas among the replying school districts. In Burlingame School District there is a Nature Trail where the plants and trees are identified. Sequoia Union High School District plans to establish a monitoring station of the Bay to monitor physical and chemical parameters of the water.

Resident Outdoor Education School Programs

San Mateo County Office of Education operates a one week outdoor program. About 4,200 students participate from grades 5 and 6. Of the replying school districts, 5 participate in this county program.

In Sequoia Union High School District, 3 of the high schools sponsor Wilderness Trips.

Special Funds or Grants

Woodside School District receives some financial support from the local P.T.A.

Evaluations

The County Office visits other Outdoor Education programs in order to get ideas and conducts long-range planning for their own outdoor program.

Woodside School District has evaluated environmental education programs and has integrated several into their own, including Souther Carolina Conservation Curriculum, Audubon Aids, and Los Angeles City Schools' TEacher Conservation through Concepts of Science.

Menlo Park City Elementary School District conducts yearly student, parent, teacher and counselor evaluations of their outdoor education program.

In Burlingame School District, parents, students and teachers filled out questionnaires upon return from the outdoor education camp.

Santa Barbara County

Reply Rate

The County Office and 12 of the 23 school districts in the county replied to the questionnaire.

Publications

Santa Barbara County Office of Education is preparing a guide for teachers for effective instruction in environmental education, including information on resource people, related field trips, simulation development, bibliography and suggested activities for grades K-6.

Santa Maria Joint Union High School District has written and submitted a detailed proposal.

Goleta Union Elementary School District has curriculum materials which they are no updating for use in connection with the resident Environmental Education Program at Camp Cachuma.

Teacher Training

Generally, 2 environmental education teacher training programs are presented per year by the County Office, one associated with Conservation Week and the other related to science instruction. The County Office also is associated with California State Polytechnic College at San Luis Obispo in teacher training activities.

Of the replying school districts, 8 either conduct or participate in environmental education teacher training activities.

Lompoc Unified School District participates in "Survival in the Balance" teacher training meetings conducted by the County Office and they include environmental education in the science workshops they give for their teachers.

Cuyama Joint Union School District receives information and training from the U.S. Forest Service and the Water Conservation District.

In Santa Barbara School District, a limited number of teachers are sent to the University of California at Santa Barbara Conservation Class Summer Session. They also conduct in-service environmental education workshops.

Cold Spring Elementary School District participates in environmental education programs sponsored by the County Office of Education and High School District Teacher Education Programs. District personnel take City College and University Extension courses.

Both Orcutt Union Elementary School District and Goleta Union Elementary School District participate in the County Office training program for 6th grade teachers held in connection with the resident outdoor program.

On-Site Environmental Study Areas

The County Office estimates that there are 4 on-site environmental study areas in the county which are organic gardens and ecology study areas.

Among the replying school districts there are 6 environmental study areas.

In Lompoc Unified School District, one school is now in the process of developing an area. In addition, the district has cooperated with county parks in developing a posted nature trail in Adam Park.

Although Santa Barbara School District now has one study area, they are currently investigating the possibility of developing an environmental study area in the Santa Ynez Mountains.

Resident Outdoor Education School Programs

The County Office operates a one week outdoor education school program. About 2,700 5th and 6th graders participate. Of the replying school districts, 6 participate in this program. Casmalia Elementary School District takes about 52 students from grades K-8 on an overnight trip.

Special Funds or Grants

The County Office of Education has received a Conservation Education Project Grant under Education Code Section 568.9.

Evaluations

The County Office gives to the teachers participating in the Outdoor Environmental Education program, the responsibility of evaluating it. The evaluation is informal and primarily concerned with suggestions for improvement in the program.

Of the replying school districts, 6 conduct evaluations of their environmental education programs.

Santa Clara County

Reply Rate

The County Office and 16 of the 32 school districts in the county replied to the questionnaire.

Publications

The County Office has prepared 2 publications, Implantation Guide for the Outdoor Science and the Conservation Education Program.

Campbell Union Elementary School District has published an environmental education guide. They are also preparing materials for school nature trails, and a Braille trail booklet.

Science teachers in Campbell Union High School District prepared a Sourcebook for Teachers of All Disciplines, with environmental education included.

Los Altos Elementary School District is preparing a report on their pilot environmental study program.

Moreland Elementary School District is preparing an Environmental Studies Gyide to be a resource for K-8 teachers.

Palo Alto City Unified School District is preparing a guide for educational opportunities provided by Foothill Park and the baylands in Palo Alto.

Teacher Training

The County Office provides environmental education inservice programs. They also assist numerous private organizations in providing conservation inservice workshops to teachers.

Of the replying school districts, 11 either conduct or participate in environmental education teacher training activities.

In Campbell Union High School District, a sourcebook was published and the district conducts training on the use of the sourcebook.

On-Site Environmental Study Areas

The County Office estimates that there are 6 on-site environmental study areas in the county, developed by enthusiastic teachers or administrators. They replied that such areas generally fall into disuse and end up as an eyesore. They feel that better district and school in-service is needed to assure proper use. Frequently, districts, administration and teachers are not supportive of the study area concept.

Among the replying school districts there are 10 environmental study areas.

Loma Prieta Joint Union School District's area is a nature study trail in a forested area of the playground.

Resident Outdoor Education School Programs

The County Office operates one week outdoor education programs. About 11,000 students from grades 6, 11 and 12 participate. Of the replying school districts, 6 send 6th grade students to participate in this program. Campbell Union High School District sends high school students to supervise this county outdoor program.

Whisman Elementary School District operates a one week outdoor school program. About 240 6th graders participate.

Morgan Hill Unified School District conducts a 2 day outdoor program. About 350 5th graders take part and the program involves high school students, teachers and park rangers.

Santa Clara Unified School District operates a one week outdoor program in which about 1,500 6th graders participate.

Special Funds or Grants

Santa Clara Unified School District has money especially set aside for outdoor education and for a summer ecology program.

In Los Altos Elementary School District budget items contribute to the outdoor 6th grade program and last year special funds were allotted for the 4th grade pilot environmental program.

Evaluations

The County Office of Education is currently developing an evaluative instrument based upon cognitive and affective objectives to assess the Outdoor Science-Conservation Education Program.

Los Altos Elementary School District is currently working on an evaluation of their pilot 4th grade environmental studies program.

Whisman Elementary School District has conducted evaluations of their field trips.

Cambrian Elementary School District has a curriculum Conservation Subcommittee, made up of parents and teachers. They are working on the development of conservation education requirements for the district.

Evergreen Elementary School District has made a preliminary assessment of their environmental program and has found that they are in need of a comprehensive program with materials.

Campbell Union High School District has evaluated their environmental program. They have found that too much "propogandizing" takes place without enough preparation of the students to really solve environmental problems.

Santa Clara Unified School District has conducted evaluations of their summer school environmental program and of their outdoor education program.

Santa Cruz County

Reply Rate

The County Office and 6 of the 10 school districts in the county replied to the questionnaire.

Publications

The County Office is preparing 3 curriculum guides, for preschool through primary, for intermediate, and for junior high. Trial drafts will be completed at the end of the 1971-72 school year and will be piloted during the 1972-73 school year.

Santa Cruz City Elementary School District is cooperating with the Santa Cruz County Office of Education in the preparation of an Environmental Education guide.

Pajaro Valley Joint Unified School District prepared a comprehensive course outline for secondary inter-disciplinary programs.

Teacher Training

The County Office conducts teacher training activities. They are now working with Monterey County, University of California at Santa Cruz and the Sierra Club, planning a 2 day conference with University of California at Santa Cruz credit.

Of the replying school districts, 4 either conduct or participate in environmental education teacher training activities.

On-Site Environmental Study Areas

According to the County Office there are 4 on-site environmental study areas in the county. Among the replying school districts there are 4 such study areas.

Resident Outdoor Education School Programs

The County Office of Education participates in a one week outdoor program for grade 6. This program is operated by Monterey County Office of Education. In the 1970-71 school year 754 students participated but in 1971-72 school year only 749 took part. Of the replying school districts, 3 take part in this program.

Special Funds or Grants

There are no special funds or grants in Santa Cruz County.

Evaluations

The County Office is now developing objectives of their environmental education program with appropriate evaluation criteria.

Of the replying school districts, 3 conduct evaluations of their environmental programs. The teachers in Santa Cruz City Elementary School District, involved in the Outdoor Education Program, annually evaluate this program.

Shasta County

Reply Rate

The County Office and 14 of the 29 school districts in the county replied to the questionnaire.

Publications

Shasta Union High School District prepared an illustrated summary description of their Summer Program in Conservation.

Happy Valley Union Elementary School District has been videotaping their outdoor science and conservation program.

Teacher Training

The County Office conducts teacher training activities in conjunction with their Environmental School. Of the replying school districts, 8 either conduct or participate in teacher training. The Superintendent in Columbia Elementary School District conducts inservice for all teachers as a former ranger and naturalist.

On-Site Environmental Study Areas

The County Office of Education knew of only one on-site environmental study area. There are 3 environmental areas among the replying school districts. Canyon Union School District has a part of the school grounds left in its natural state. This area is used as a study place for the students.

Resident Outdoor Education School Programs

The Shasta County Office of Education operates a one week program. About 1100 6th graders participate. Of the replying school districts, 13 participate in this county program.

Special Funds or Grants

Shasta Union High School District has some environmental education funds.

Evaluations

Shasta County Office has developed a form to obtain a subjective evaluation of their program.

Shasta Union High School District has evaluated their program and has found the benefits derived from their summer program demonstrate the value of involving youth in meaningful and realistic experiences.

Sierra County

Reply Rate

The County Office and the one school district in the county, Sierra-Plumas Joint Unified, replied jointly to the questionnaire.

Publications

There are preparing publications which consist of various courses of study and outlines regarding extended classroom activities.

Teacher Training

District personnel participate in regional and area workshops for the purpose of gathering and disseminating worthwhile information and technique to the teachers in the county.

On-Site Environmental Study Areas

There are 3 on-site environmental study areas in Sierra County.

Resident Outdoor Education School Programs

There are no special funds or grants in Sierra County.

Special Funds or Grants

There are no special funds or grants in Sierra County.

Evaluations

Periodic reviews by teachers and administrators with a view to upgrading and reorganizing their individual schools' curriculum are made.

Siskiyou County

Reply Rate

The County Office and 9 of the 33 districts in the county replied to the questionnaire.

Publications

Siskiyou Union High School District has prepared an environmental education publication.

Teacher Training

The County Office encourages teachers to take courses and gives them ideas and suggestions for implementing their programs.

Of the replying school districts, 5 participate in environmental education teacher training activities. Weed Union Elementary School District personnel take related courses from the local community college. Fort Jones Elementary School District teachers take environmental studies extension courses from Chico State College. McCloud Union Elementary School District receives teacher training from the U.S. Forest Service and local industry.

On-Site Environmental Study Areas

According to the County Office, there are 2 on-site environmental study areas in the county. Siskiyou Union High School District is working on an environmental area in Butte Valley.

Resident Outdoor Education School Programs

Siskiyou County Office of Education does not operate a resident outdoor education school program, but would like to start one. Siskiyou Union High School District participates in an overnight program operated by Mount Shasta High School. About 30 students from grades 9-12 take part.

McCloud Union Elementary School District operates a resident outdoor program in which about 90 students from grades 4-8 participate.

Special Funds or Grants

There are no special funds or grants for environmental education in Siskiyou County.

Evaluations

Siskiyou County Office of Education conducts some subjective evaluations of environmental education programs. Siskiyou Union High School District has evaluated its environmental program and has not been too satisfied with the results. Weed Union Elementary School District evaluates their environmental education program through staff discussion.

Solano County

Reply Rate

The County Office and 2 of the 6 school districts in the county replied to the questionnaire.

Publications

Fairfield-Suisun Joint Unified School District is preparing an environmental education publication.

Dixon Unified School District published a field guide for 5th grade teachers to use in outdoor education. They are now preparing curriculum guides for primary through secondary with attempts at broad curriculum articulation.

Teacher Training

The County Office has recently conducted environmental education workshops.

Fairfield-Suisun Joint Unified School District has 2 environmental study areas. One school uses Suisun Slough for environmental study and another uses the creek and park area adjacent to their school. A committee has been set up to work on a long range goal which will include development of a science or nature center that will be involved in environmental study and another uses the creek and park area adjacent to their school. A committee has been set up to work on a long range goal which will include development of a science or nature center that will be involved in environmental education.

Dixon Unified School District has one high school area being developed for use by all district schools and agencies of educational nature in the community.

Resident Outdoor Education School Programs

Dixon Unified School District conducts an outdoor program for grade 5 and about 130 students participate. Fairfield-Suisun Joint Unified School District conducts a 2 week outdoor program. About 40 elementary students take part.

Special Funds or Grants

Fairfield-Suisun Joint Unified School District conducts the summer program under Title I.

Dixon Unified School District received an $8,000 Model School Contract Project Grant.

Evaluations

The County Office of Education has conducted environmental education evaluations. Dixon Unified School District is presently working on a survey with pupil and teacher input, and plans to followup with parents and administrators.

Sonoma County

Reply Rate

The County Office and 15 of the 38 school districts in the county replied to the questionnaire.

Publications

The County Office has 2 publications: Ecology In the Elementary Grades, a multi-disciplined approach to the study of ecology using media as a data source and What's Ecology?, which combines science and social science.

A spring survey of flora and fauna of the Lafferty Ranch entitled Sonoma Mountain Field Study, was prepared by Petaluma City Elementary/Joint Union High School District. They are also preparing a teacher's guide and a student handbook for the Lafferty Ranch Environmental Studies Trail.

Piner-Olivet Union School District prepared the Salt Point State Park Project Report, a cooperative planning project.

City of Santa Rosa Elementary and City of Santa Rosa High School District has prepared a Unit of Population Biology.

The Windsor Union School District 6th grade class prepares a booklet each year at camp.

Teacher Training

The County Office conducts environmental education workshops and works with teachers in developing curriculum. They also participate in model teaching. Of the replying school districts, 11 either conduct or participate in environmental education teacher training activities.

Piner-Olivet Union School District utilizes college students as teacher assistants in their outdoor education program as a part of their training.

In Petaluma City Elementary/Joint Union High School District, the Curriculum Committee on Ecology, Conservation and Environmental Studies has conducted teacher training activities through teacher field trips, inservice activities and guest speakers.

Bennett Valley Union School District receives environmental teacher training from the Soil Conservation Service.

Roseland School District conducts teacher and counselor environmental education workshops.

On-Site Environmental Study Areas

According to the County Office, there are 12 environmental study areas in Sonoma County, modeled after Norman Marsh's effort in Sacramento. There are 8 on-site environmental study areas among the replying school districts. Analy Union High School District has one study area in conjunction with the National Wildlife Federation. Piner-Olivet Union School District does not have any environmental study areas, but is in the process of developing one at each school. Petaluma City Elementary/Joint Union High School District is developing the property called Lafferty Ranch, an environmental study area located on Sonoma Mountain within district boundaries.

Resident Outdoor Education School Programs

The County Office, through the Sonoma County Outdoor Education Association, operates a 5 day program for grades 1-12, over 2,000 students participate. Of the replying school districts, 4 participate in this county program.

Petaluma City Elementary/Joint Union High School District operates a one week program. About 179 students take part.

Piner-Olivet Union School District, in cooperation with other districts, operates a one week program. About 80 6th grade students participate.

City of Santa Rosa Elementary and City of Santa Rosa High School District participates in a one week program operated by 3 elementary school principals. Within this school district, Rincon Valley Junior High School operates a one week program. About 30 junior high school students participate.

Healdsburg Union Elementary School District participates in a one week program operated by the summer school program. About 125 students from grades 1-6 take part.

Windsor Union School District operates a one week program for grade 6 and 80-100 students participate.

Special Funds or Grants

The County Office has special funds for the development of the Salt Point State Park program.

Piner-Olivet Union School District used state funds to develop the Salt Point Project Report as a cooperative planning grant.

Petaluma City Elementary/Joint Union High School District received a $2775 State Conservation Grant.

Evaluations

The County Office has reviewed the Brandwein Outline and is willing to help work toward implementation of the program. Of the replying school districts, 3 evaluate their environmental education programs. Petaluma City Elementary/Joint Union High School District through films, student handbooks, committee work and field trips has conducted a 3 year evaluation of their environmental education program, but never in depth or on a well-organized basis.

Stanislaus County

Reply Rate

The County Office and 8 of the 27 school districts in the county replied to the questionnaire.

Publications

The County Office has prepared a modified revision of suggested classroom activities in environmental problems.

Teacher Training

The County Office participates in environmental education teacher training activities. The Area IV County Superintendents are in the process of planning inservice programs in cooperation with training institutions in the area. Of the replying school districts, 5 take part in environmental education teacher training.

On-Site Environmental Study Areas

The County Office replied that there are no on-site environmental study areas although one district has property and plans for an on-site study area. Among the replying school districts there are 2 study areas.

Resident Outdoor Education School Programs

The County Office coordinates a one week program and 2400-2800 6th graders participate. Of the replying school districts, 5 participate in this county 6th grade program.

Paradise Elementary School District and the County Office operate overnight and one week outdoor programs. About 75 students from grades 4-8 participate.

Turlock Joint Elementary School District operates a one week program. About 100 students from grades 5-7 take part.

Special Funds or Grants

There are no special funds or grants in Stanislaus County.

Evaluations

In Paradise Elementary School District, evaluation is continual to determine the effectiveness of the district program.

In Turlock Joint Elementary School District, students have evaluated the outdoor education program.

Oakdale Union Elementary School District conducts evaluations of their environmental education program.

Sutter County

Reply Rate

The County Office and 5 of the 12 districts in the county replied to the questionnaire.

Publications

The County Office has prepared an environmental education publication.

Teacher Training

The County Office of Education conducts environmental education teacher training activities.

In Yuba City Unified School District, the teachers have an opportunity to participate in a workshop each year.

Franklin Elementary School District personnel participate in environmental education workshops and field trips.

On-Site Environmental Study Areas

In Yuba City Unified School District, one school is planning an outdoor learning lab.

Resident Outdoor Education School Programs

The County Office, through the Woodleaf Conservation and Ecology Program, operates a one week outdoor program. East Nicolaus Joint Union High School District participates in a one week program. About 12 students from grades 11 and 12 take part.

Special Funds or Grants

The County Office has special environmental education funds.

Evaluations

The Sutter County Office of Education evaluates their environmental program.

In Browns Elementary School District, teachers evaluate the week long conservation study.

Tehama County

Reply Rate

The County Office and 2 of the 18 school districts in the county replied to the questionnaire.

Publications

Evergreen Union Elementary School District is preparing a publication on classroom projects.

Teacher Training

The County Office is planning a class and inservice at 2 recreational camp sites. The 2 replying school districts participate in environmental education teacher training activities.

On-Site Environmental Study Areas

According to the County Office, there are 2 environmental study areas in the county.

Resident Outdoor Education School Programs

The County Office does not have a resident outdoor program, but is planning to develop one.

Special Funds or Grants

There are no special funds or grants in Tehama County.

Evaluations

The Tehama County Office of Education conducts evaluations of environmental programs.

Trinity County

Reply Rate

The County Office did not reply, but 5 of the 13 school districts in the County did reply to the questionnaire.

Publications

One of the teachers in Trinity County Joint Union High School District is making a film on the field work of the advanced conservation class, with salmon, under supervision of Fish and Game specialists.

Teacher Training

Of the replying school districts, 3 receive environmental education teacher training. Trinity County Joint Union High School District receives its environmental training from the U. S. Forest Service.

On-Site Environmental Study Areas

There are 5 study areas in Trinity County. Trinity County Joint Union High School District hopes to develop their 3 study areas so that the elements will be more easily identified.

Resident Outdoor Education School Programs

There are no resident outdoor education school programs in Trinity County.

Special Funds or Grants

No special funds or grants have been received in Trinity County.

Evaluations

Trinity County Joint Union High School District evaluates their environmental program, which is now in its 3rd year of operation.

Tulare County

Reply Rate

The County Office and 16 of the 49 school districts in the county replied to the questionnaire.

Publications

The County Office has prepared some unspecified environmental education publications.

Tulare City Elementary School District prepared extensive 5th grade material for the day trip to SCICON. They are now preparing for revisions and updating of materials.

Visalia Unified School District has prepared materials relating to the 5th and 6th grade outdoor education program.

Teacher Training

The County Office holds a Fall Weekend Teacher Orientation to SCICON (the county outdoor education site), a Spring Weekend orientation and an Environmental Education class with 2 units of credit. Each week during the 33 weeks of operation at SCICON, they hold a special 2 hour session for the 3 to 6 teachers at the site. They also hold some courses in conjunction with Cal State Bakersfield at the site. They also hold some courses in conjunction with Cal State at Bakersfield. Of the replying school districts, 11 participate or conduct environmental education teacher training activities. In Exeter Union School District, individual teachers take classes through Fresno State College. Porterville Elementary School District conducts environmental education teacher training and grants the teachers leave time to participate in their inservice program.

On-Site Environmental Study Areas

According to the County Office, there are 2 environmental study areas in the county. Among the replying school districts there are 6 study areas. Tulare City Elementary School District's area is called the Maple Nature Trail.

Resident Outdoor Education School Programs

The Tulare County Office of Education operates an excellent outdoor program at SCICON. About 3,000 students attend the one week program for 6th grade. Approximately 3,000 day trip students, and about 1,000 weekend trip students participate in

the SCICON program. There is also some week long high school participation. Of the replying school districts, 8 take part in the one week SCICON program for 6th graders. Four of the replying school districts participate in the one day 6th grade program. Two school districts send 5th grade students to SCICON for one day and one school district send 5th graders on overnight outings.

Traver Joint Elementary School District participates in an outdoor program operated by San Luis Obispo County Office of Education at Point Piedras Blankas. About 35 students from grades 5, 6, 7 and 8 take part in this overnight trip.

The teacher of Advanced Biology in Exeter Union High School District, takes students from grades 11 and 12 on environmentally-oriented field trips.

Special Funds or Grants

The County Office has received a $25,000 grant from Educational Facilities Laboratory used to plan for future programs. They also receive small forest reserve, flood control and wildlife funds.

In Visalia Unified School District, one or two schools use ESEA Title I funds to finance their outdoor education program.

Evaluations

The County Office and 9 of the replying school districts conduct evaluations of their environmental education programs.

Tuolumne County

Reply Rate

The County Office did not reply, but 5 of the 12 school districts in the county did reply to the questionnaire.

Publications

There are no environmental education publications in Tuolumne County.

Teacher Training

There are no environmental education teacher training activities in Tuolumne County.

On-Site Environmental Study Areas

There are 2 on-site environmental study areas in the county. Sonora School District plans to develop an area by 1973.

Resident Outdoor Education School Programs

There are no resident outdoor education school programs in the county.

Special Funds or Grants

Curtis Creek Elementary School District has NDEA funds for equipment only.

Evaluations

Sonora School District has contacted other districts for information on their environmental programs.

Ventura County

Reply Rate

The County Office and 7 of the 20 school districts in the county replied to the questionnaire.

Publications

The County Office has prepared 4 booklets for teachers. Oxnard Elementary School District has also prepared an environmental education publication.

Teacher Training

The County Office works with colleges and extension offices to support teacher education in conservation and environmental concerns. Of the replying school districts, 3 participate in environmental education teacher training activities.

Santa Clara School District personnel take extension classes from the University of California at Santa Barbara.

On-Site Environmental Study Areas

According to the County Office, there are 3 on-site environmental study areas in Ventura County. Among the replying school districts there are 4 environmental areas.

Resident Outdoor Education School Programs

Santa Clara School District operates an outdoor program on the school premises. About 16 students from grades 1-6 participate.

Special Funds or Grants

There are no special funds or grants in Ventura County.

Evaluations

Of the replying school districts, 2 evaluate their environmental education programs.

Yolo County

Reply Rate

The County Office and 3 of the 5 school districts in the county replied to the questionnaire.

Publications

In Davis Joint Unified School District, each elementary school is developing outdoor education program materials for grade 6. The secondary schools are also beginning outdoor education programs and developing materials.

Teacher Training

The County Office is going to offer a course through the University of California, Davis Extension, to identify resource agencies, day sites and appropriate learning activities. Of the replying school districts, 2 participate in environmental teacher training activities.

On-Site Environmental Study Areas

The County Office replied that there are 2 environmental study areas in the county. Woodland Joint Unified School District has one study area. According to Davis Joint Unified School District, there are 5 environmental areas in the district, one at each elementary school. The district is considering joint purchase of an environmental site with the city.

Resident Outdoor Education School Programs

The County Office participates in an outdoor program operated by Sacramento County Office of Education at Sly Park. About 200 6th graders in the County take part. Washington Unified School District participates in the Sly Park program.

Davis Joint Unified School District operates a one week program for 6th grade students and for secondary students. About 500-600 students take part.

Special Funds or Grants

No special Funds or grants have been received in Yolo County.

Evaluations

Two of the replying school districts conduct evaluations of their environmental education programs.

Yuba County

Reply Rate

The County Office and one of the 5 school districts in the county replied to the questionnaire.

Publications

The County Office published a Resource and Trail Guide for the Kellog Flat Ecological Study Lab.

Teacher Training

The County Office conducts and participates in environmental education teacher training activities and with the help of the Area III Science Project, they hope to do more. Wheatland Elementary School District conducts environmental teacher training.

On-Site Environmentel Study Areas

According to the County Office, there are 2 on-site environmental study areas in the county, and more are planned. There is one nature study area in Wheatland Elementary School District.

Resident Outdoor Education School Programs

The County Office of Education cooperates with Colusa and Sutter Counties in operating a one week outdoor program. About 1500 6th graders participate. Wheatland Elementary School District takes part in this outdoor program.

Special Funds or Grants

Yuba County is a member of the Area III Science Project.

Evaluations

The County Office and the replying school district conduct evaluations of their environmental programs.

STATEWIDE DATA SUMMARY

In order for tomorrow's adults to cope with our many environmental problems, there is a great need for them to be educated in an atmosphere of environmental awareness and problem solving.

Although education in the wise use of natural resources and the protection of the environment is becoming more widespread, only a minority of students in California are being reached. A much smaller percentage receive a thorough and comprehensive training program. Environmental education in California is conducted on a hit-or-miss basis. If a teacher or administrator in the school, school district or county office happens to be very interested and knowledgeable in environmental problems, then the chances are good that an environmental education program will be developed, if any funding is available. These two conditions, interested and knowledgeable instructors, and funding, make thorough and effective environmental education programs a rarity.

An effective program would begin in kindergarten and extend all the way through school. It would include interdisciplinary curriculum, environmental considerations in textbooks, continual and widespread environmental teacher training, outdoor study areas on the school ground, resident outdoor school programs and continual evaluation and revision. Unfortunately, most schools have none or only one or two of these elements.

This survey of all county offices of education and school districts in California, on the subject of environmental education, warranted a 38% reply rate. No respondents claimed to have an environmental education program covering all grade levels. Although California's textbooks are required by law to include environmental considerations when appropriate, in fact the transformation has not yet occurred on a significant level. Only 23% of the replying school districts and county offices conduct any environmental teacher training and only 45% participate in environmental teacher training programs set up by others. There are a total of 321 on-site environmental study areas among the replying school districts throughout the state. Only 14% of the respondents conduct resident outdoor education school programs and only 33% participate in programs conducted by others. Evaluations of environmental education programs are conducted by only 33% of the replying school districts and county offices. It is impossible to tell what kind of programs, if any, are conducted in the remaining 62% of the school districts and county offices, that did not respond to the questionnaire. It does seem safe to assume, however, that a school district or county office would be more likely to reply if they were involved in an environmental program.

Reply Rate	
Questionnaires sent out	1125
Questionnaires returned	428
Publications	
Districts/counties with environmental education publications	131
Districts/counties without environmental education publications	296
Teacher Training	
Districts/counties conducting environmental education teacher training activities	98
Districts/counties without environmental education teacher training activities	141
Districts/counties participating in environmental education teacher training activities	193
On-Site Environmental Study Areas	
Number of study areas	321
Districts/counties with no environmental study areas	232
Resident Outdoor Education School Programs	
Districts/counties conducting resident outdoor programs	62
Districts/counties participating in resident outdoor programs	143
Districts/counties without resident outdoor programs	223
Special Funds or Grants	
Districts/counties with special funds or grants for environmental education	49
Districts/counties with no special environmental education funds	373
Evaluations	
Districts/counties conducting evaluations of environmental education programs	142
Districts/counties not conducting evaluations of environmental education programs	288

SPECIFIC AGENCY REPORTS

U.S. OFFICE OF EDUCATION

Summary

Of the replying counties and districts, 1⌀8 received materials, publications and information from this office.

Seven received environmental education speakers and consultants from the U.S. Office of Education.

Nine districts/counties have received environmental education teacher training from them.

Comments of the Counties

Alameda	- Resource materials.
Amador	- No contact.
Butte	- Needed assistance.
El Dorado	- Some help in establishing the environmental study program.
Glenn	- Good.
	- Very little, but good.
Humboldt	- Haven't had anything of significance filter down.
Imperial	- Some value.
	- Good.
Kern	- We only receive a few materials here.
Los Angeles	- Very little information.
	- Printed materials valued and varied.
Merced	- Used to supplement the regular program.
	- None.
Monterey	- Always arrive after the "Week" being observed.
	- Good.
Orange	- Incidental mail-outs.
	- Minimal.
	- None so far.
	- To my knowledge, we have not used any of these services, federal, state or local.
	- Nothing.
Sacramento	- Nothing.
San Bernardino	- None.
San Diego	- Have submitted conservation program proposal.
	- Materials and inservice workshop meetings helpful for exchange of ideas.
	- The content of teaching material was heavily based on the conservation concepts rather than total environmental education.
	- Not coordinated, fund shortage.

San Joaquin	- Good.
San Mateo	- Extremely helpful.
	- Some value.
Santa Barbara	- Little value.
Santa Clara	- The selection of materials is limited, however, we do receive enough copies of all materials for each classroom.
Santa Cruz	- Minimal available.
	- Some help.
Shasta	- We intend to apply for conservation education grant this year.
Siskiyou	- Not complete enough.
Sonoma	- Not complete enough.
	- Limited but adequate.
	- We would like some.
Stanislaus	- Good material.
Tulare	- Very little.
Tuolumne	- Need more concrete illustrations - too general.
Yolo	- Fair value.

STATE DEPARTMENT OF EDUCATION

Summary

Of the replying counties and districts, 237 have received environmental education materials, publications and information from the State Department of Education.

Forty-four districts/counties have received speakers and consultants from them.

The Department of Education has provided environmental education facilities (parks, tours) for 22 of the replying districts and counties.

Eighteen have received teacher training from the Department.

Comments of the Counties

Alameda	- Barely adequate.
	- Lack of consultant service on site to local district and schools.
Amador	- No contact.
Butte	- Limited.
Calaveras	- Little value.
Colusa	- Very good.
El Dorado	- Some materials helped in the construction of trails, etc.
Fresno	- Good.
	- Consultant services and materials from Rudy were available.
Glenn	- Good.
	- Some good.

Humboldt	- Some publications useful, workshop.
	- Some visual aids useful.
	- Fair, piecemeal, inadequate to talk.
Imperial	- Some value.
	- Very useful.
Kern	- Good.
	- Materials have been very good. We only have a speaker occassionally.
Lassen	- Fair.
Los Angeles	- Very little information.
	- Fair.
	- Materials have been used in classroom teaching.
	- Good booklet - helpful.
	- Too limited, vocabulary difficult sometimes.
	- We would love more copies of "Outdoor Education on Your School Grounds".
	- Excellent when available.
	- Limited.
Marin	- State consultant helped set up summer school program which has had great effect on all year programs.
	- Adequate.
Merced	- None.
Monterey	- Fair.
	- Good.
Orange	- Conservation materials.
Riverside	- Some.
San Bernardino	- Very little.
San Diego	- Have submitted conservation program proposal.
	- State consultant notified in CEE Project proposal and communication.
	- Excellent consultant facilitator.
	- Very good inspirational man, Rudolph Schafer.
	- Not coordinated, fund shortage.
San Joaquin	- Fair.
San Mateo	- Extremely helpful. Valuable. Some value.
Santa Barbara	- Some value.
Santa Cruz	- Minimal available.
	- Some help.
Shasta	- We have requested help of consultant services to prepare grant application.
	- Good.
	- Not much value.
Siskiyou	- Conservation Day materials.
	- Not enough.

Sonoma	- Some help.
	- Excellent.
	- We would like more.
Stanislaus	- Good material.
Trinity	- Useful.
Tulare	- Limited use.
Ventura	- Good ideas.
Yolo	- Good value.

COUNTY OFFICES OF EDUCATION

Summary

Of the replying districts, 176 receive materials, publications and information from the county offices of education.

Ninety-five receive speakers and consultants from their County Office of Education.

Seventy-six of the school districts have been provided facilities (parks tours) by their County Office.

Of the replying school districts, 89 have received teacher training from their County Office.

Comments of School Districts About Their County Office

Alameda	- Inadequate.
	- Materials are good when they are more jointly prepared with local schools.
	- MER program - Failure of program.
	- Marine Ecology Program at Newark High School.
	- Excellent service.
Amador	- Resource material.
	- Helps out when it can. Does a variety of things.
Calaveras	- Some value.
Colusa	- Serves as the coordinator.
	- On the local level they are interested, act helpful.
Contra Costa	- Great.
El Dorado	- Science consultant is math, not science oriented.
Fresno	- Good.
	- Regional Learning Center - Sonora.
Glenn	- Above average.
	- Excellent.
	- Completely organized our outdoor education program.
	- Excellent.

Humboldt	- Films (we need consultants in this area).
	- Photo materials from audio-visual office.
	- No services available.
Kern	- Fair.
	- We get quite a bit of help from our county office.
	- Good, but under-financed and deserving of aid for environmental education program.
Lassen	- Good.
	- Fair.
Los Angeles	- A book list - Environment, Ecology, Conservation 1971, very helpful.
	- Very little information.
	- Film - good.
Merced	- None.
	- Green Meadows Outdoor Camp.
Monterey	- We get the consultant once a year.
	- Good.
	- Excellent.
	- County Office is becoming increasingly useful - they are developing a teaching workshop for the spring.
Placer	- A consultant available to districts.
Riverside	- Excellent teacher prepared materials.
Sacramento	- All helpful.
San Bernardino	- None.
	- The district conducts no special program.
San Diego	- Center for Environmental Studies.
	- County assistance helps greatly in keeping us current.
	- Use of county and state resources for the study of environment - very good program.
	- CEE and CER most helpful in efficient utilization of community resources.
	- Concentration of community and education efforts toward housing and dissemination of information.
	- Not coordinated. Fund shortage.
San Mateo	- Good effort.
	- Extremely helpful.
	- Good assistance.
	- They took the lead in developing outdoor education for county schools.
	- Some value.
Santa Barbara	- Very good inservice program.
	- Good - more needed.
Santa Clara	- Need speakers. Alot of help with outdoor program.
Santa Cruz	- Our best source so far.
	- Good inservice program.
	- Our program is dependent on the service of both our county and Monterey County.

Shasta	- Teacher-training helpful. - Conducts educational program at Whiskey Town Lake Conservation Camp. - Very good considering staff size. - County video tape recorder. - Good.
Siskiyou	- County science consultant is very concerned in this field. Makes many suggestions.
Solano	- Last spring we had a series of Saturday inservice training sessions that were very valuable.
Sonoma	- Some help. - Close cooperation and assistance. - We work with a consultant at the county office level in outdoor education.
Stanislaus	- Outdoor education - 6th grade - excellent program.
Sutter	- Fair.
Trinity	- Necessary.
Tulare	- SCICON - excellent. - Too few films and very few ecologically oriented. - Good. - SCICON. - Most appropriate. - SCICON. - No services for high school.
Tuolumne	- Relays class offerings. - Audio-visual materials.
Yolo	- Sacramento County Conservation and Science Committee distributes excellent materials.

U. S. FOREST SERVICE

Summary

Eighty-eight of the counties/districts have received materials, publications and information from the U. S. Forest Service.

Seventy-nine have received environmental education speakers and consultants.

Fifty-one of the counties and districts have been provided with facilities by the Forest Service.

Thirty-two have received environmental education teacher training from them.

Comments of the Counties

Amador	- Not very useful.
Calaveras	- Little value.
El Dorado	- Local supervisor's office, excellent cooperation. Consultant service.
Fresno	- We have used a state consultant.
	- The local forestry help is outstanding.
	- Very helpful.
	- Ranger Doris Clabough, conservation education specialist.
Glenn	- Above average.
Humboldt	- Some very capable speakers.
	- Provided trees for nature area.
	- Very helpful and cooperative.
Kern	- Had speaker and films.
	- Good.
	- Very good.
	- Our service has been excellent.
Kings	- Excellent.
	- Roosevelt School.
	- Doris Clabough.
Lassen	- Good.
	- Good.
Los Angeles	- Good.
	- Good booklet.
	- Very informative - excellent.
	- Useful information on endangered species.
	- Angeles personnel have done an oustanding job in assisting.
	- Mr. Cornell Harvell has been of great assistance.
Merced	- Extremely helpful.
Modoc	- Conducted an excellent workshop.
Monterey	- Many not trained to work with young children, they try hard.
Riverside	- Excellent support of our program.
	- Four-Five consultants and speakers.
San Bernardino	- Discussion of smog problems on Ponderosa Pine.
	- Excellent cooperation.
	- Also work experience and other federal job program.
San Diego	- Much help from Cleveland National Forest.
Santa Barbara	- Greatest amount of help.
	- Potentially this agency has offered their services.
Shasta	- Has plans, but no money.
	- Extremely helpful.
	- Maintains Whisky Town Lake Conservation Camp.
	- Excellent speakers and films.
	- Fair.

Siskiyou	- Very poor - know nothing of it.
	- Excellent cooperation.
	- Programs are good.
Solano	- Best cooperation and involved interest thus far.
	- Workshop using Forest Service personnel on inquiry task developed by E. McDonald.
Trinity	- We have had this and it's great.
	- Quite helpful.
Tuolumne	- Speakers come to the school to talk to the children.

U. S. BUREAU OF FISHERIES AND WILDLIFE

Summary

Of the replying districts and counties, 15 have received materials from Fisheries and Wildlife.

Seven have received environmental education speakers and consultants.

Three of the districts and counties have used facilities (parks, tours) of Fish and Wildlife.

One school district has received environmental teacher training from this bureau.

Comments of the Counties

Shasta	- Excellent tours - all grade levels.
Siskiyou	- Good.

U. S. SOIL CONSERVATION SERVICE

Summary

Of the counties/districts replying, 18 have received materials from the Soil Conservation Service.

Sixteen have received speakers and consultants from them.

Five of the districts/counties have used facilities made available by the Soil Conservation Service.

Six of the districts and counties have received environmental teacher training.

Comments of the Counties

El Dorado	- Valuable advice for construction of ponds.
Kings	- Ernest Eton.

Riverside	- Excellent support of our program.
Sonoma	- Sherman Finch SR office does a great job.
Yolo	- Engineering for site development.

U. S. DEPARTMENT OF AGRICULTURE

Summary

Of the replying counties and districts, 27 have received materials, publications and information from the Department of Agriculture.

Ten of the counties and districts have received speakers and consultants.

Six have used facilities (parks, tours) made available to them by the Department of Agriculture.

One district or county has received environmental teacher training.

Comments

Amador	- Good materials.
Contra Costa	- Very worthwhile, very accommodating.
Los Angeles	- Good.
Siskiyou	- Good.

U. S. DEPARTMENT OF COMMERCE

Summary

Eleven of the replying districts and counties have received publications and information from the Department of Commerce.

U. S. DEPARTMENT OF THE INTERIOR

Summary

Of the replying counties/districts, 19 have received information from the Department of the Interior.

Three have received environmental speakers and consultants.

Five of the districts and counties have received facilities from the Department of the Interior.

Two have received teacher training in the environmental field.

Comments of the Counties

Fresno	- Very good.
San Bernardino	- Inexpensive pamphlets and pictures.
San Diego	- Excellent information on soil conservation and water.
Solano	- Biologist from fish and wildlife on preparation and use of specimens.

ENVIRONMENTAL PROTECTION AGENCY

Summary

Eight of the districts and counties have received speakers and consultants.

Two of the districts/counties have used facilities provided by the Environmental Protection Agency.

Two have received environmental teacher training.

Four have received speakers and consultants.

Comments of the Counties

San Mateo	- Excellent.
San Diego	- Very helpful.

NATIONAL PARK SERVICE

Summary

Of the districts and counties, 31 have received materials publications and information from the Park Service.

Twenty-four have received environmental speakers and consultants.

Twenty-eight of the districts and counties have used National Parks and tours.

Five have received environmental teacher training from the National Park Service.

Comments of the Counties

Kings	- Excellent.
Marin	- Very good.
	- Good service and helpful to our students.
San Diego	- Limited to conservation and preservation.
Tulare	- Field trips - excellent.
	- Films not very effective.
	- Ranger talks are very good.

STATE PARKS AND RECREATION

Summary

Of the replying counties/ districts, 38 have received information from Parks and Recreation.

Thirty of the counties and districts have received speakers and consultants.

Forty-three have used facilities, parks and tours provided to them by Parks and Recreation.

Four of the districts and counties have received environmental teacher training.

Comments of the Counties

Butte	- We have been fortunate to have such cooperative agencies in our immediate area.
	- They have always been very cooperative in every way.
Calaveras	- Valuable.
Contra Costa	- Rangers have been most helpful in our 4th grade program on the mountain.
El Dorado	- Consultant service-trail instruction.
	- Good at coast and Columbia State Park.
Lake	- Clearlake State Park.
Lassen	- Good.
Merced	- Excellent source - thoughtful, courteous and considerate.
Santa Barbara	- Good camping facilities.
Santa Cruz	- Have been instrumental in implementing program.
Siskiyou	- Good.
Solano	- Individuals as resource persons.
Sonoma	- Good.
	- Sonoma County Headquarters are a big help.
	- Parks have provided facilities.
Tulare	- Field trips - good.

STATE DEPARTMENT OF FISH AND GAME

Summary

Of the districts and counties, 41 have received publications from the Department of Fish and Game.

Thirty have received speakers and consultants.

Forty-three of the districts/counties have used Fish and Game facilities.

Four of the districts and counties have received environmental teacher training.

Comments of the Counties

El Dorado	- Excellent help from the local state personnel.
Fresno	- Good at coast.
Glenn	- Above average.
Humboldt	- Good.
San Bernardino	- Excellent cooperation.
San Diego	- Excellent underwater park at La Jolla.
Santa Barbara	- Not on children's level.
Santa Cruz	- Natural Bridges Park.
	- Have been instrumental in implementation of the program.
	- The availability of the State facilities in our area is of great assistance to us in our program.
Shasta	- This agency has always been available to us.
Siskiyou	- Local game warden assists in projects and speaks to classes on environmental subjects.
	- Good.
Trinity	- Necessary.

STATE DIVISION OF FORESTRY

Summary

Forty-five of the replying districts and counties have received materials from the Division of Forestry.

Thirty-six have received environmental speakers and consultants.

Of the replying school districts, 16 have used facilities provided by the Division of Forestry.

Seven have received environmental teacher training.

Comments of the Counties

Amador	- Some value.
Calaveras	- Little value.
Fresno	- Good in the mountains.
Glenn	- These men worked very hard to educate the teachers and worked five days with the children at the camp site. They were most helpful. Camp would not have been possible without them.

Kings	- Dean Smallbaum, Fresno, California.
Los Angeles	- Good.
	- Pamphlets are excellent from all the various federal state and local agencies.
Merced	- Very helpful.
Modoc	- Conducted a workshop.
Monterey	- Smokey the Bear forest fire kits.
Riverside	- Excellent support.
	- Of some value.
San Bernardino	- Excellent cooperation.
San Diego	- Primary grade materials, good variety and inexpensive.
Shasta	- This agency has always been available to us.
	- Questionable value.
Siskiyou	- Assistance on field trips.
	- Film and talks.
Sonoma	- Big help.
Tulare	- Good service.
Tuolumne	- Excellent.

STATE UNIVERSITIES

Summary

Of the replying districts and counties, 11 have received materials and information from their nearby state university.

Nineteen have received speakers and consultants from the state universities.

Nine of the districts/counties have used facilities (parks, tours) provided by the state universities.

Nineteen of the districts and counties have received environmental teacher training from the state univerisities.

Comments of the Counties

Fresno	- Ecology as a part of regular biology course.
	- Series of ecology courses - 1/2 unit.
	- A lot of proposed help.
Humboldt	- We need more teacher training.
Kern	- Excellent cooperation but just got started.
San Diego	- Offering extension classes.
Santa Clara	- Resource people for motivating students.
Tulare	- Limited to individual.

RESOURCES AGENCY

Summary

Eight of the districts and counties have received materials from the Resources Agency.

Three have received speakers and consultants.

One of the districts or counties have used facilities provided by the Resources Agency.

Comments of the Counties

Humboldt	- Publications.
Los Angeles	- Very helpful.
Merced	- He presented slides on the San Luis Project. Fair to good for the sixth grader.
Siskiyou	- Very poor.

STATE DEPARTMENT OF AGRICULTURE

Summary

Five of the replying districts/counties have received materials from the Department of Agriculture.

Three have received speakers and consultants.

Three of the districts and counties have used facilities provided by the Department of Agriculture.

STATE DEPARTMENT OF WATER RESOURCES

Summary

Ten of the districts and counties have received publications from the Department of Water Resources.

Ten have received speakers and consultants.

Seven of the districts/counties have used facilities (parks, tours) provided by Water Resources.

One of the districts and counties has received environmental teacher training.

EAST BAY REGIONAL PARKS

Summary

Six of the counties and districts have received information from East Bay Regional Parks.

Six have received speakers and consultants.

Seven of the counties and districts have made use of East Bay Regional Park's facilities.

Four have received environmental teacher training.

Comments of the Counties

Alameda	- Excellent. - All 5th graders spend one day at Sunol Park. Services of the park staff are used. The cooperation, the interest and the knowledge of the staff has made this a very beneficial program. - Very excellent.

COMMUNITY ORGANIZATIONS

SIERRA CLUB

Summary

Of the replying districts and counties, 33 have received materials and information from the Sierra Club.

Twenty-nine have received speakers and consultants.

Four of the districts/counties have used facilities made available by the Sierra Club.

Fourteen have received Sierra Club environmental teacher training.

Comments of the Counties

Los Angeles	- Very helpful. - Most valuable. - Materials very good but biased.
Merced	- Can be helpful, depend on individual involved.
San Diego	- Work in cooperation with San Diego County Department of Education in providing workshops for teachers. - Support for inservice conference. - Good ecological approach.
Santa Barbara	- Very good. - Outstanding films, tour guides, speakers.

NATIONAL AUDUBON SOCIETY

Summary

Of the replying districts and counties, 35 have received Audubon materials, publications and information.

Twenty-two have received speakers and consultants from the Audubon Society.

Thirteen of the districts and counties have used facilities provided by the Audubon Society.

Nine have received Audubon environmental teacher training.

Comments of the Counties

Calaveras	- Valuable.
Contra Costa	- Great.
Kern	- Excellent talk on the Condor.

Los Angeles	- Good student value. - Conduct an excellent program for teachers and students.
Marin	- Outstandin-
San Diego	- Audubon Park, Silverwood - clearing areas to be developed.
Santa Barbara	- Very helpful.
Solano	- Individual member assistance, materials from National Office.
Sonoma	- Very important to our environmental education program.
Ventura	- Extremely interesting.

PROPOSED LEGISLATION

The major need expressed is for legislative allocation of enough funds to sufficiently carry out the state mandate requiring instruction in the protection and conservation of resources, including the necessity for the protection of our environment. Several proposed that a "pollution tax" be levied, and the money be allocated for environmental education. Others desire direct allocation of state and federal funding specifically for the development and maintenance of environmental education programs. One district expressed the need for state legislation that would allow a county office to set a tax to be used to support its resident school of environmental education. Two of the replying districts/counties suggested per pupil expenditures. One called for $10 per student excess cost factor in statewide support for week-long resident programs.

Most of the requested funding would be used for 1) teacher training, 2) on-site environmental study areas, 3) resident outdoor education programs, and 4) curriculum and materials development.

In the area of teacher training, funding was requested for a specialist teacher in environmental education to teach courses either as a part of the regular school program or as co-curricular after-school programs. A large number requested funding to pay for environmental inservice teacher training. There is a great need to bring resource materials to teachers in the form of demonstrations, workshops, and conferences. Money must go to those agencies who are engaged in teacher training and inservice training in this field because without the personal contact available in training programs, very little change will occur in environmental education. Without well-trained teachers, school children will not have the opportunity to learn about pollution controls and how each individual student might better prepare himself for future protection of the environment.

Funding is needed to develop and maintain on-site environmental study areas. Site development, material development, preparation against vandalism could be accomplished through funding. Legislation was also requested by many, for reimbursement of transportation costs to environmental study areas.

Legislation is requested by many that will enable districts to secure funds for the establishment, operation and maintenance of environmental camp facilities designed to enhance environmental studies. In requesting funds for such facilities, SCICON (Tulare County), KEEP (Kern County), and Sly Park (Sacramento County) were suggested as models. Some have requested money for outdoor education camps for 6th grade. One requested

financial support to enable 100% of California's sixth graders to participate in a camp or resident outdoor education school program. It was suggested that environmental education camps be established at the seashore, the Delta Region, the Valley floor, the foothill area, the Sierra Nevada, and the desert region. A loan fund for outdoor school facilities was requested, along with legislation to encourage use of district monies to pay for the food and lodging of students unable to contribute support for outdoor education programs. Respondents complained that it is difficult to get volunteers to relieve teachers while camping of such duties as cabin supervision, lunch supervision, etc. Funding to hire help is desirable because teachers working a 24 hour day, are not eager to repeat the experience that was exceptionally good otherwise.

In the area of curriculum development, assistance is needed for needs assessment and program design. It is desired by many that free pamphlets and other instructional materials (films, slides) be provided. Much more money is needed for development of instructional materials geared to California cities and counties, especially in areas of pollution. Funds are requested to employ staff to work on curriculum along with funds to purchase materials.

Money for purposes other than the four general categories was requested. It was requested that money be provided so that schools and businesses could work together to the benefit of both. Financial aid is needed to support the cost of transportation for field trips to 1) environmental "disaster" areas - sites of gross pollution and 2) various biomes so that students can see how the same environmental concepts apply to a variety of ecosystems. It was requested that funds be provided to permit poor districts to develop and staff programs, and develop model courses for all grade levels. Legislation was suggested to provide funding for a five year period so that all teachers from K to 8 could construct a conservation and ecology program of field trips and extended experiences, commensurate with grade levels, that would take the children through all 8 grades.

There were ideas for environmental education legislation other than for straight funding. A very good idea expressed by many is to fund and require an environmental coordinator position in each school district, or another pre-determined educational area. Some school districts are too small to warrant a coordinator, in which case several small school districts would go together. Other school districts, such as Los Angeles Unified School District and San Francisco Unified School District, are too large to be handled by one coordinator, where several should be hired. Another legislative request by many is to require environmental education training as one of the prerequisites for obtaining a teaching credential. There were many who suggested environmental intern training programs. Students could be hired to put on programs pertaining to environmental studies, to do research on

trash and garbage problems, to collect re-usable materials, and to create posters, radio tapes and video tapes to be used as public service information. Legislation was requested to enable State Parks and Recreation to eliminate admission fees to schools for guided tours of their facilities. It was also suggested that state parks prepare facilities to accommodate semi-transient elementary student groups on summer tours and field trips. This would solve the problem of hostels, food preparation and sanitary facilities. It was requested that encouragement be given to community colleges and high schools in providing adult programs in environmental education. The present state mandate is so indefinable and confused that few, if any, teachers or administrators are inclined to present anything more than a superficial treatment of environmental education. Legislation was suggested so that each state, federal and local agency would have as one of its duties, the task of explaining its function in relation to environmental studies to the schools. One suggestion is to make surplus foods available for all meals served at Outdoor Education schools.

As apparent, legislative requested by the respondents were many and varied.

SUGGESTED AREAS FOR IMPROVEMENT

Since it is difficult to find ways to involve students in environmental activities, there were many requests for development of suggestions for student involvement. There is a desire for communication of local environmental issues and problems to the schools and student ecology clubs so that they can become active in these areas. It was recommended that direction be given on the role of students, parents, and educational bodies on how they can affect legislation for the protection and preservation of the environment. Materials were requested which outline specific projects that students can complete independently or in small groups with emphasis on discovery.

More audio-visual aids are desired to enhance teaching programs. Free and inexpensive environmental movies, filmstrips and slides are considered too scarce by many. One suggestion was for various agencies to loan films to the schools. Another suggested a well-developed statewide environmental audio-visual library. Some of the suggested subject areas for these materials were models of conservation showing the results of negative and positive practices, recycling programs, water pollution, and air pollution.

Most teachers are not well-informed enough about environmental studies, or do not feel comfortable enough with this field, to develop an environmental teacher program on their own. In order to overcome this deficiency, many requested that specific guidelines and objectives for environmental education be developed. Many believe that a basic comprehensive environmental education curriculum guide, for each grade level, would be most useful. Learning packages for units of study including all support materials were also requested. Those replying asked that practical ideas for use in the classroom by teachers with a minimum amount of training in the subject, be included in these guides. It was also requested that specific lesson plans, along with exercises be included.

The lack of coordination among the school districts of California, the County Offices of Education, the Department of Education, U. S. Office of Education, other national, state and local governmental agencies, community organizations and private industry with regard to environmental education, is wasteful of resources. The many activities, materials, ideas, and monies must be drawn together so that the great amount of duplication will be minimal.

Several suggested that a newsletter be sent to the schools to detail happenings in this field including pertinent legislation, worthwhile educational programs in progress, related research reports and publications. Many requested that newsletters present both sides of environmental issues and problems. One replied that students are interested in 1) legislation, both federal and state 2) economic impact of anti-pollution measures and 3) scientific data concerning conservation. It was suggested that information concerning outstanding programs be disseminated, as funding for special approved projects always stimulate program development. It was also requested that a list of bills passed each year by the state and federal legislatures that will protect the environment, be distributed to all the schools.

Inclusion of environmental concerns or concepts in textbooks of all subjects, was a request made by a great number. It was also suggested that more environmental textbooks be written.

Many expressed the need for a current listing or directory of governmental agencies, businesses and community organizations, including the names of resource persons, materials and services available to the schools.

Several other suggestions were made for ways to upgrade environmental education. It was suggested that teaching units be developed that are geared to topographical or geographical areas. A need was expressed for an environmental speaker's bureau, which could be tapped by the schools. In order to educate the public in the wise use of our natural resources, adult environmental education should not be ignored. Information must be stepped up to the public, and environmental lectures organized. Children may learn in school that they should try to protect the environment, but if they don't see any of this practiced at home, much of the training will be ignored and forgotten. Many small and rural school districts complained that it is nearly impossible for them to obtain funding for environmental programs, since they do not have the resources available to develop and write effective grant proposals. Perhaps a concerted effort to unite small districts for the purpose of developing joint environmental education programs and projects, would help alleviate this situation.

One of the most important needs of educators, is a set of criteria by which they can evaluate their environmental education programs. They need to see what mistakes they are making, and the deficiencies of their programs. They need a goal to work toward in the development and improvement of environmental education in the schools.

THE RESOURCES DEVELOPMENT INTERNSHIP PROGRAM

The preceding report was completed by a WICHE intern during the summer of 1972. This intern's project was part of the Resources Development Internship Program administered by the Western Interstate Commission for Higher Education (WICHE).

The purpose of the internship program is to bring organizations involved in community and economic development, environmental problems and the humanities together with institutions of higher education and their students in the West for the benefit of all.

For these organizations, the intern program provides the problem-solving talents of student manpower while making the resources of universities and colleges more available. For institutions of higher education, the program provides relevant field education for their students while building their capacity for problem-solving.

WICHE is an organization in the West uniquely suited for sponsoring such a program. It is an interstate agency formed by the thirteen western states for the specific purpose of relating the resources of higher education to the needs of western citizens. WICHE has been concerned with a broad range of community needs in the West for some time, insofar as they bear directly on the well-being of western peoples and the future of higher education in the West. WICHE feels that the internship program is one method for meeting its obligations within the thirteen western states. In its efforts to achieve these objectives, WICHE appreciates having received the generous support and assistance of the Economic Development Administration, the Jessie Smith Noyes Foundation, the National Endowment for the Humanities, the National Science Foundation, and of innumerable local leaders and community organizations, including the agency that sponsored this intern project.

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